

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Office of Chief Clerk **DATE:** January 29, 2024

From: Diane Goss and Don Redmond
Staff Attorneys
Environmental Law Division

Subject: Backup Documents for the Consideration of a Hearing Request Agenda.

Applicant: US Ecology Winnie

Proposed Permit No.: WDW344, WDW345, WDW346, WDW347,
WDW348, WDW349, and WDW350

Program: Office of Waste, Radioactive Materials Division

Docket No.: TCEQ Docket No. 2023-1590-WDW

Enclosed please find a copy of the following documents for inclusion in the background material for this permit application:

- Technical Summary and Executive Director's Preliminary Decision
- Final Draft Permits No. WDW344 through WDW350
- Compliance History Reports for Rating Years 2019, 2020 and 2022
- Executive Director's Response to Public Comment

March 10, 2023

**TECHNICAL SUMMARY AND EXECUTIVE DIRECTOR'S PRELIMINARY
DECISION**

Description of Application

Applicant: US Ecology Winnie, LLC

Underground Injection Control (UIC) Permit Nos. WDW344, WDW345, WDW346,
WDW347, WDW348, WDW349 and WDW350
EPA I.D. No. TXR000036731

Location: US Ecology Winnie is located at 26400 Wilber Road approximately 6 miles south of its intersection with Texas Highway 73 in Winnie, Jefferson County, Texas. The waste disposal wells are, or to be, located as follows:

WDW344 is located 11,498.5 feet from the west line and 916.6 feet from the south line of the Stephen Eaton League Survey, A-22, Latitude 29°44'40" North, Longitude 94°15'01" West

WDW345 is located 11,760.7 feet from the west line and 711.2 feet from the south line of the Stephen Eaton League Survey, A-22, Latitude 29°44'38" North, Longitude 94°14'58" West

WDW346 is located 11,476 feet from the west line and 1,443 feet from the south line of the Stephen Eaton League Survey, A-22, Latitude 29°44'45" North, Longitude 94°15'01" West

WDW347 is to be located 11,681.3 feet from the west line and 1,520.3 feet from the south line of the Stephen Eaton League Survey, A-22, Latitude 29°44'46" North, Longitude 94°14'59" West

WDW348 is to be located 11,942.5 feet from the west line and 1,213.9 feet from the south line of the Stephen Eaton League Survey, A-22, Latitude 29°44'43" North, Longitude 94°14'56" West

WDW349 is to be located 13,522.5 feet from the west line and 522.7 feet from the south line of the Stephen Eaton League Survey, A-22, Latitude 29°44'37" North, Longitude 94°14'38" West

WDW350 is to be located 13,430.1 feet from the west line and 129.8 feet from the south line of the Stephen Eaton League Survey, A-22, Latitude 29°44'33" North, Longitude 94°14'39" West

General: The applicant currently operates a commercial nonhazardous waste management facility. Industrial and municipal wastes are received from off-site sources on a commercial basis. Wastes disposed at this facility include water-based injection fluid generated from physical processing and chemical treatment of commingled Class I, II, and III nonhazardous industrial wastes and nonhazardous municipal landfill leachate. Injection wells authorized by UIC permits WDW347, WDW348, WDW349, and WDW350 are not yet constructed. Injection wells authorized by UIC permits WDW344, WDW345, and WDW346 were initially put in service as follows:

TECHNICAL SUMMARY

WDW344, WDW345, WDW346, WDW347, WDW348, WDW349, and WDW350
March 10, 2023

WDW344 in 1999
WDW345 in 1999
WDW346 in 2021

Total volumes of wastewater (as of 12/31/2020) injected into the wells since they were put in service are as follows:

WDW344 – 694,632,222 gallons
WDW345 – 400,122,356 gallons
WDW346 – 0 gallons

For WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350 the cumulative volumes of wastewater injected shall not exceed 12,929,850 gallons per month (30.4 days), or 155,158,200 gallons per year (365.25 days) based on an average monthly cumulative injection rate of 295 gallons per minute (gpm). The maximum cumulative instantaneous injection rate shall not exceed 600 gallons per minute (gpm).

Request: US Ecology Winnie, LLC submitted an application to the Texas Commission on Environmental Quality (TCEQ) dated May 16, 2019 for permit renewals for the continued operation and construction of underground injection wells for disposal of commercial nonhazardous waste and for amendment to the permits to change the base of the Injection Zone to 4,000 feet BGL, change the top of the Injection Zone for WDW346 to 1,076 feet BGL and change the MASIP based on varying specific gravity for WDW346, WDW347, WDW348, WDW349 and WDW350. The application was received on May 28, 2019.

Authority: The proposed permits are required by the Injection Well Act, Texas Water Code §27.011 and Solid Waste Disposal Act, Texas Health and Safety Code §361.061. Draft permits have been prepared in accordance with applicable requirements of 30 Texas Administrative Code (TAC) Chapters 281, 305 and 331, which have been adopted under the authority of the Texas Water Code, Chapters 5 and 27 and Texas Health and Safety Code, Chapter 361.

Technical Information

The permit renewal and amendment application has been evaluated in accordance with 30 TAC Chapters 305, 331 and 335. The permits will authorize injection of industrial and municipal nonhazardous and commercial wastes at rates not to exceed maximum cumulative instantaneous injection rate of 600 gallons per minute (gpm) and average monthly cumulative injection rate of 295 gallons per minute (gpm) and cumulative volumes not to exceed 12,929,850 gallons per month and 155,158,200 gallons per year. The maximum allowable surface injection pressure is dependent on varying specific gravity ranging from 1.0 to 1.22, and the injection rate will be such as to not initiate any new fractures, propagate any existing fractures, or cause movement of fluid out of the injection zone. No artificial penetrations were identified within the 2.5-mile area of review that require corrective action. Information presented in the application demonstrates all wells are properly plugged or constructed to prevent endangerment to an Underground Source of Drinking Water (USDW). The Railroad Commission of Texas issued a non-endangerment of oil and gas reservoir letter dated June 20, 2019 after its staff completed a technical review of the permit application. Well design, operation, testing, monitoring and reporting meet all applicable regulatory requirements in 30

TECHNICAL SUMMARY

WDW344, WDW345, WDW346, WDW347, WDW348, WDW349, and WDW350
March 10, 2023

TAC Chapter 331, Subchapter D. Both well materials and the reservoir are compatible with the wastes authorized for injection.

The permitted Injection Zone is within the Miocene, Caprock, Pliocene, and Lafayette Formation at the following depths:

- WDW344 from 940 to 4,000 feet BGL;
- WDW345 from 880 to 4,000 feet BGL;
- WDW346 from 1,076 to 4,000 feet BGL;
- WDW347 from 1,100 to 4,000 feet BGL;
- WDW348 from 950 to 4,000 feet BGL;
- WDW349 from 925 to 4,000 feet BGL; and
- WDW350 from 1,000 to 4,000 feet BGL.

The authorized Injection Interval is within the Caprock Formation at the following depths:

- WDW344 from 1,260 to 1,785 feet BGL;
- WDW345 from 1,270 to 1,750 feet BGL;
- WDW346 from 1,147 to 1,551 feet BGL;
- WDW347 from 1,580 to 1,980 feet BGL;
- WDW348 from 1,130 to 1,530 feet BGL;
- WDW349 from 1,180 to 1,580 feet BGL; and
- WDW350 from 1,290 to 1,690 feet BGL.

The Montgomery Sand Formation is the lowermost underground source of drinking water in the vicinity of the wells. Its base occurs at depths of approximately 477 feet BGL in this area.

The proposed renewal permits include the following:

- A. standard provisions for construction, operation and closure of the subject injection wells including requirements for testing, monitoring, and reporting;
- B. standard provisions to establish and maintain financial assurance to provide for proper facility closure;
- C. amendments in the following manner:
 - a. change the base of the Injection Zone to 4,000 feet BGL;
 - b. change the top of the Injection Zone for WDW346 to 1,076 feet BGL; and
 - c. change the MASIP based on varying specific gravity for WDW346, WDW347, WDW348, WDW349 and WDW350
- D. updated permit provisions to incorporate current standard language and requirements into the permit.

Process for Reaching a Final Decision and Opportunities for Public Participation

Once the proposed permits are drafted, they are sent to the TCEQ Office of the Chief Clerk for public notice. Mailed and newspaper notice of the application and executive director's preliminary decision are provided in accordance with 30 TAC §39.651(d) with instructions for submitting public comments and requesting a public meeting. Written public comments and requests for a

TECHNICAL SUMMARY

WDW344, WDW345, WDW346, WDW347, WDW348, WDW349, and WDW350

March 10, 2023

public meeting must be submitted to the Office of the Chief Clerk within 30 days from the date of publication of the newspaper notice.

The executive director will consider public comments in making a final decision on the application. The TCEQ will hold a public meeting if the executive director determines that there is a significant degree of public interest in the application or if requested by a local legislator. After the deadline for public comments, the executive director will consider the comments and prepare a response to all relevant and material or significant public comments. The response to comments will include the executive director's decision on the application and will provide instructions for requesting a contested case hearing or reconsideration of the executive director's decision.

A contested case hearing will only be granted based on disputed issues of fact that are relevant and material to the commission's decision on the application on issues that were raised during the public comment period and not withdrawn. The executive director may issue final approval of the application unless a timely contested case hearing request or request for reconsideration is filed. If a timely hearing request or request for reconsideration is filed, the executive director will not issue final approval of the permits and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled commission meeting. If hearing requests are granted, the hearings will be conducted by the State Office of Administrative Hearings. Decisions regarding the permits may be reconsidered in response to a Motion for Rehearing or a Motion for Reconsideration and by appeal to a District Court in Travis County.

Preliminary Decision

The executive director has made a preliminary decision that the proposed permits, if issued, meet all statutory and regulatory requirements.

The proposed permits do not authorize variances or alternatives to required standards.

Prepared by:



Pavan Bairu, P.E., Project Manager
UIC Permits Section
Radioactive Materials Division

Reviewed by:



Bryan Smith, P.G., Manager
UIC Permits Section
Radioactive Materials Division



Permit No. WDW344

This permit supersedes
and replaces Permit
No. WDW344 issued
November 20, 2009.

Texas Commission on
Environmental Quality
Austin, Texas

Permit to Conduct
Class I Underground Injection
Under Provisions of Texas Water Code
Chapter 27 and Texas Health and Safety
Code Chapter 361

I. Permittee

US Ecology Winnie, LLC
26400 Wilber Road
Winnie, Texas 77665

II. Type of Permit

Initial _____ Renewal Amended

Commercial Noncommercial _____

Hazardous _____ Nonhazardous

Onsite Offsite

Authorizing Disposal of Waste from Captured Facility _____

Authorizing Disposal of Waste from Off-site Facilities Owned by Owner/Operator _____

III. Nature of Business

Commercial disposal of nonhazardous industrial and municipal wastes.

CONTINUED on Pages 2 through 6

The permittee is authorized to conduct injection in accordance with limitations, requirements, and other conditions set forth herein. This permit is granted subject to the rules and orders of the Commission, and the laws of the State of Texas. The permit will be in effect for ten years from the date of approval or until amended or revoked by the Commission. If this permit is appealed and the permittee does not commence any action authorized by this permit during judicial review, the term will not begin until judicial review is concluded.

DATE ISSUED:

For the Commission

IV. General Description and Location of Injection Activity

The disposal well is used to dispose of industrial and municipal nonhazardous wastes generated by the permittee's facility and wastes from other sources. The facility is located at 26400 Wilber Road, Winnie, Texas 77665. The well is located 11,498.5 feet from the west line and 916.6 feet from the south line of the Stephen Eaton League Survey, A-22, Latitude 29°44'40" North, Longitude 94°15'01" West, Jefferson County, Texas. The injection zone is within the Miocene, Caprock, Pliocene, and Lafayette Formations at the depths of 940 to 4,000 feet below ground level (BGL). The authorized injection interval is within the Caprock Formation at the depths of 1,260 to 1,785 feet BGL.

V. Character of the Waste Streams

A. Industrial and municipal nonhazardous waste authorized to be injected by this permit shall consist solely of the following waste streams:

1. Waste generated by the permittee and from other sources:
 - a. Water-based injection fluid generated from physical processing and chemical treatment of commingled Class I, II, and III nonhazardous industrial wastes and nonhazardous municipal landfill leachate.
2. Other associated wastes such as groundwater and rainfall contaminated by the above authorized wastes, spills of the above authorized wastes, and wash waters and solutions used in cleaning and servicing the waste disposal well system equipment which are compatible with the permitted waste streams, injection zone and well materials.
3. Wastes generated during well construction or closure of the well and associated facilities that are compatible with permitted the waste streams, injection zone and well materials.

B. The injection of wastes is limited to those wastes authorized in Provision V.A. above, into the Miocene, Caprock, Pliocene, and Lafayette Formation within the injection zone between the depths of 940 to 4,000 feet BGL.

C. The pH of injected waste streams shall be greater than 2.0 and less than 12.5.

D. Except when authorized by the Executive Director, the specific gravity of injected fluids shall not exceed 1.22 as measured at 75°F.

VI. Waste Streams Prohibited From Injection

Unless authorized by Provision V.A., the following waste streams are prohibited:

- A. Hazardous wastes as defined under 40 CFR §261.3(a) through (d), issued pursuant to the Resource Conservation and Recovery Act and the Hazardous and Solid Waste Amendments, which are regulated by the Commission as authorized by the United States Environmental Protection Agency (EPA), including but not limited to any listed hazardous waste or a waste derived from the treatment, storage or disposal of a listed hazardous waste;
- B. Any by-product material as defined by Texas Health and Safety Code §401.003(3);

- C. Any low-level radioactive waste as defined by Texas Health and Safety Code §401.004;
- D. Any naturally occurring radioactive material (NORM) waste as defined by Texas Health and Safety Code §401.003(26); and
- E. Any oil and gas NORM waste as defined by Texas Health & Safety Code §401.003(27).

VII. Operating Parameters

The well shall be operated in compliance with the requirements of 30 Texas Administrative Code (TAC) Chapters 305, 331, and 335; the plans and specifications of the permit application; and the following conditions:

- A. Surface injection pressure shall not cause pressure in the injection zone to:
 - 1. initiate any new fractures or propagate existing fractures in the injection zone;
 - 2. initiate new fractures or propagate existing fractures in the confining zone; or
 - 3. cause movement of fluid out of the injection zone that may contaminate underground sources of drinking water (USDWs), and fresh water.
- B. The operating surface injection pressure dependent on varying specific gravity shall not exceed as tabulated below:

Specific Gravity as measured at 75°F	Maximum Surface Injection Pressure (psig)
1.000 – 1.02	211
1.021 – 1.04	200
1.041 – 1.06	189
1.061 – 1.08	178
1.081 – 1.10	167
1.101 – 1.12	156
1.121 – 1.14	145
1.141 – 1.16	134
1.161 – 1.18	123
1.181 – 1.20	112
1.201 – 1.22	101

- A. For WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350, the maximum cumulative instantaneous injection rate shall not exceed 600 gallons per minute and the average cumulative injection rate, as calculated on a monthly basis, shall not exceed 295 gallons per minute.

- B. The cumulative volume of wastewater injected into WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350 shall not exceed 12,929,850 gallons per month, or 155,158,200 gallons per year, based on the average cumulative injection rate of 295 gallons per minute.
- C. A positive pressure of at least 100 psig over tubing injection pressures shall be maintained in the tubing-casing annulus for the purpose of leak detection. Temporary deviations from this requirement which are a part of normal well operations are authorized but may not exceed 15 minutes in duration. For 15 minutes after the pressure differential drops below 100 psig, the permittee shall conduct troubleshooting and proceed to restore a minimum 100 psig pressure differential. If a minimum 100 psig pressure differential cannot be achieved within 15 minutes, the permittee shall commence shut-in procedures on the well and notify the Texas Commission on Environmental Quality (TCEQ) in writing within 48 hours. The permittee may continue to operate the well under flow conditions that maintain a minimum 100 psig pressure differential.
- D. The permittee shall notify the Executive Director at least 24 hours prior to commencing any workover which involves taking the injection well out of service. Approval by the Executive Director shall be obtained before the permittee may begin work. Notification shall be in writing and shall include plans for the proposed work. The Executive Director may grant an exception in accordance with 30 TAC §331.63(i) when immediate action is required to comply with 30 TAC §331.63(b). Completion of the well outside the approved injection interval, by perforation of casing, setting of screen, or establishment of open hole section, requires that the permitted injection interval be changed according to 30 TAC §331.62(a)(3)(B) to include the depths of well completion. Pressure control equipment shall be installed and maintained during workovers which involve the removal of tubing.

VIII. Monitoring and Testing Requirements

- A. Monitoring and testing shall be in compliance with the requirements of 30 TAC §305.125, §331.64, the plans and specifications of the permit application, and the following conditions.
- B. The integrity of the long string casing, injection tubing, and annular seal shall be tested by means of an approved pressure test with a liquid or gas annually and whenever there has been a well workover. The integrity of the cement within the injection zone shall be tested by means of an approved radioactive tracer survey annually. A radioactive tracer survey may be required after workovers that have the potential to damage the cement within the injection zone.
- C. The pressure buildup in the injection zone shall be monitored annually, including at a minimum, a shutdown of the well for a sufficient time to conduct a valid observation of the pressure fall-off curve.
- D. A temperature log, noise log, oxygen activation log or other approved log is required at least once every five years to test for fluid movement along the entire borehole.
- E. A casing inspection, casing evaluation, or other approved log shall be run whenever the owner or operator conducts a workover in which the injection string is pulled,

unless the Executive Director waives this requirement due to well construction or other factors which limit the test's reliability, or based upon the satisfactory results of a casing inspection log run within the previous five years. The Executive Director may require that a casing inspection log be run every five years if there is sufficient reason to believe the integrity of the long string casing of the well may be adversely affected by naturally occurring or man-made events.

- F. Injection fluids shall be tested in accordance with 30 TAC §331.64(b) and the approved waste analysis plan.
 - G. The pH and specific gravity of the injected waste shall be monitored continuously at a minimum frequency of at least once every 24 hours and whenever the waste stream changes.
 - H. Corrosion monitoring of well materials shall be conducted quarterly and in accordance with 30 TAC §331.64(g). Test materials shall be the same as those used in the wellhead, injection tubing, packer, and long string casing, and shall be continuously exposed to the waste fluids except when the well is taken out of service.
 - I. The permittee shall ensure that all waste analyses used for waste identification or verification and other analyses for environmental monitoring have been performed in accordance with methods specified in the current editions of United States Environmental Protection Agency (EPA) SW-846, ASTM standards or other methods accepted by the TCEQ. The permittee shall have a Quality Assurance/Quality Control (QA/QC) program that is consistent with EPA SW-846 and the TCEQ Quality Assurance Project Plan.
- IX. Record Keeping Requirements
- The permittee shall keep complete and accurate records as required by 30 TAC Chapters 305, 331, and 335.
- X. Financial Assurance for Well Closure
- In accordance with 30 TAC Chapter 37, §305.154(a)(9), and §§331.142-144, the permittee shall secure and maintain financial assurance, in a form approved by the Executive Director, in the amount of \$250,000 (cost estimate prepared May 2019 in current dollars). Adjustments to the cost estimates for plugging and abandonment in current dollars, and to financial assurance based thereon, shall be made in accordance with 30 TAC §331.143(d) and Chapter 37.
- XI. Additional Requirements
- A. The base of the wellhead shall be enclosed by a diked, impermeable pad or sump to protect the ground surface from spills and releases. Any liquid collected shall be disposed of in an appropriate manner.
 - B. Acceptance of this permit by the permittee constitutes an acknowledgment and agreement that the permittee will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

- C. This permit is subject to further orders and rules of the Commission. In accordance with the procedures for amendments and orders, the Commission may incorporate into permits already granted, any condition, restriction, limitation, or provision reasonably necessary for the administration and enforcement of Texas Water Code, Chapter 27 and Texas Health and Safety Code Chapter 361.
- D. This permit does not convey any property rights of any sort, nor any exclusive privilege, and does not become a vested right in the permittee.
- E. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of state or local law or regulations.
- F. The following rules are incorporated as terms and conditions of this permit by reference:
 - 1. 30 TAC Chapter 305, Consolidated Permits;
 - 2. 30 TAC Chapter 331, Underground Injection Control; and
 - 3. 30 TAC Chapter 335, Industrial Solid Waste and Municipal Hazardous Waste;
- G. The express incorporation of the above rules as terms and conditions of this permit does not relieve the permittee of an obligation to comply with all other laws or regulations which are applicable to the activities authorized by this permit.
- H. Incorporated Application Materials. This permit is based on, and the permittee shall follow, the plans and specifications contained in the Class I Underground Injection Control Application dated May 16, 2019 as revised on July 18, 2019, April 5, 2021, October 28, 2021, September 30, 2022, and January 20, 2023 which are hereby approved subject to the terms of this permit and any other orders of the TCEQ.

These materials are incorporated into this permit by reference as if fully set out herein. Any and all revisions to these elements shall become conditions of this permit upon the date of approval by the Commission.
- I. All pre-injection units servicing this well must be authorized under a TCEQ Permit under 30 TAC Chapter 335 or must be exempt from the requirement for a permit under 30 TAC §335.2 or 30 TAC §335.53(f).
- J. The Texas solid waste registration (SWR) number for this site is 39098.



Permit No. WDW345

This permit supersedes
and replaces Permit
No. WDW345 issued
November 20, 2009.

Texas Commission on
Environmental Quality
Austin, Texas

Permit to Conduct
Class I Underground Injection
Under Provisions of Texas Water Code
Chapter 27 and Texas Health and Safety
Code Chapter 361

I. Permittee

US Ecology Winnie, LLC
26400 Wilber Road
Winnie, Texas 77665

II. Type of Permit

Initial _____ Renewal Amended

Commercial Noncommercial _____

Hazardous _____ Nonhazardous

Onsite Offsite

Authorizing Disposal of Waste from Captured Facility _____

Authorizing Disposal of Waste from Off-site Facilities Owned by Owner/Operator _____

III. Nature of Business

Commercial disposal of nonhazardous industrial and municipal wastes.

CONTINUED on Pages 2 through 6

The permittee is authorized to conduct injection in accordance with limitations, requirements, and other conditions set forth herein. This permit is granted subject to the rules and orders of the Commission, and the laws of the State of Texas. The permit will be in effect for ten years from the date of approval or until amended or revoked by the Commission. If this permit is appealed and the permittee does not commence any action authorized by this permit during judicial review, the term will not begin until judicial review is concluded.

DATE ISSUED:

For the Commission

IV. General Description and Location of Injection Activity

The disposal well is used to dispose of industrial and municipal nonhazardous wastes generated by the permittee's facility and wastes from other sources. The facility is located at 26400 Wilber Road, Winnie, Texas 77665. The well is located 11,760.7 feet from the west line and 711.2 feet from the south line of the Stephen Eaton League Survey, A-22, Latitude 29°44'38" North, Longitude 94°14'58" West, Jefferson County, Texas. The injection zone is within the Miocene, Caprock, Pliocene, and Lafayette Formations at the depths of 880 to 4,000 feet below ground level (BGL). The authorized injection interval is within the Caprock Formation at the depths of 1,270 to 1,750 feet BGL.

V. Character of the Waste Streams

A. Industrial and municipal nonhazardous waste authorized to be injected by this permit shall consist solely of the following waste streams:

1. Waste generated by the permittee and from other sources:
 - a. Water-based injection fluid generated from physical processing and chemical treatment of commingled Class I, II, and III nonhazardous industrial wastes and nonhazardous municipal landfill leachate.
2. Other associated wastes such as groundwater and rainfall contaminated by the above authorized wastes, spills of the above authorized wastes, and wash waters and solutions used in cleaning and servicing the waste disposal well system equipment which are compatible with the permitted waste streams, injection zone and well materials.
3. Wastes generated during well construction or closure of the well and associated facilities that are compatible with permitted the waste streams, injection zone and well materials.

B. The injection of wastes is limited to those wastes authorized in Provision V.A. above, into the Miocene, Caprock, Pliocene, and Lafayette Formation within the injection zone between the depths of 880 to 4,000 feet BGL.

C. The pH of injected waste streams shall be greater than 2.0 and less than 12.5.

D. Except when authorized by the Executive Director, the specific gravity of injected fluids shall not exceed 1.22 as measured at 75°F.

VI. Waste Streams Prohibited From Injection

Unless authorized by Provision V.A., the following waste streams are prohibited:

A. Hazardous wastes as defined under 40 CFR §261.3(a) through (d), issued pursuant to the Resource Conservation and Recovery Act and the Hazardous and Solid Waste Amendments, which are regulated by the Commission as authorized by the United States Environmental Protection Agency (EPA), including but not limited to any listed hazardous waste or a waste derived from the treatment, storage or disposal of a listed hazardous waste;

B. Any by-product material as defined by Texas Health and Safety Code §401.003(3);

- C. Any low-level radioactive waste as defined by Texas Health and Safety Code §401.004;
- D. Any naturally occurring radioactive material (NORM) waste as defined by Texas Health and Safety Code §401.003(26); and
- E. Any oil and gas NORM waste as defined by Texas Health & Safety Code §401.003(27).

VII. Operating Parameters

The well shall be operated in compliance with the requirements of 30 Texas Administrative Code (TAC) Chapters 305, 331, and 335; the plans and specifications of the permit application; and the following conditions:

- A. Surface injection pressure shall not cause pressure in the injection zone to:
 - 1. initiate any new fractures or propagate existing fractures in the injection zone;
 - 2. initiate new fractures or propagate existing fractures in the confining zone; or
 - 3. cause movement of fluid out of the injection zone that may contaminate underground sources of drinking water (USDWs), and fresh water.
- B. The operating surface injection pressure dependent on varying specific gravity shall not exceed as tabulated below:

Specific Gravity as measured at 75°F	Maximum Surface Injection Pressure (psig)
1.000 – 1.02	214
1.021 – 1.04	203
1.041 – 1.06	192
1.061 – 1.08	181
1.081 – 1.10	170
1.101 – 1.12	159
1.121 – 1.14	147
1.141 – 1.16	136
1.161 – 1.18	125
1.181 – 1.20	114
1.201 – 1.22	103

- A. For WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350, the maximum cumulative instantaneous injection rate shall not exceed 600 gallons per minute and the average cumulative injection rate, as calculated on a monthly basis, shall not exceed 295 gallons per minute.

- B. The cumulative volume of wastewater injected into WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350 shall not exceed 12,929,850 gallons per month, or 155,158,200 gallons per year, based on the average cumulative injection rate of 295 gallons per minute.
- C. A positive pressure of at least 100 psig over tubing injection pressures shall be maintained in the tubing-casing annulus for the purpose of leak detection. Temporary deviations from this requirement which are a part of normal well operations are authorized but may not exceed 15 minutes in duration. For 15 minutes after the pressure differential drops below 100 psig, the permittee shall conduct troubleshooting and proceed to restore a minimum 100 psig pressure differential. If a minimum 100 psig pressure differential cannot be achieved within 15 minutes, the permittee shall commence shut-in procedures on the well and notify the Texas Commission on Environmental Quality (TCEQ) in writing within 48 hours. The permittee may continue to operate the well under flow conditions that maintain a minimum 100 psig pressure differential.
- D. The permittee shall notify the Executive Director at least 24 hours prior to commencing any workover which involves taking the injection well out of service. Approval by the Executive Director shall be obtained before the permittee may begin work. Notification shall be in writing and shall include plans for the proposed work. The Executive Director may grant an exception in accordance with 30 TAC §331.63(i) when immediate action is required to comply with 30 TAC §331.63(b). Completion of the well outside the approved injection interval, by perforation of casing, setting of screen, or establishment of open hole section, requires that the permitted injection interval be changed according to 30 TAC §331.62(a)(3)(B) to include the depths of well completion. Pressure control equipment shall be installed and maintained during workovers which involve the removal of tubing.

VIII. Monitoring and Testing Requirements

- A. Monitoring and testing shall be in compliance with the requirements of 30 TAC §305.125, §331.64, the plans and specifications of the permit application, and the following conditions.
- B. The integrity of the long string casing, injection tubing, and annular seal shall be tested by means of an approved pressure test with a liquid or gas annually and whenever there has been a well workover. The integrity of the cement within the injection zone shall be tested by means of an approved radioactive tracer survey annually. A radioactive tracer survey may be required after workovers that have the potential to damage the cement within the injection zone.
- C. The pressure buildup in the injection zone shall be monitored annually, including at a minimum, a shutdown of the well for a sufficient time to conduct a valid observation of the pressure fall-off curve.
- D. A temperature log, noise log, oxygen activation log or other approved log is required at least once every five years to test for fluid movement along the entire borehole.
- E. A casing inspection, casing evaluation, or other approved log shall be run whenever the owner or operator conducts a workover in which the injection string is pulled,

unless the Executive Director waives this requirement due to well construction or other factors which limit the test's reliability, or based upon the satisfactory results of a casing inspection log run within the previous five years. The Executive Director may require that a casing inspection log be run every five years if there is sufficient reason to believe the integrity of the long string casing of the well may be adversely affected by naturally occurring or man-made events.

- F. Injection fluids shall be tested in accordance with 30 TAC §331.64(b) and the approved waste analysis plan.
 - G. The pH and specific gravity of the injected waste shall be monitored continuously at a minimum frequency of at least once every 24 hours and whenever the waste stream changes.
 - H. Corrosion monitoring of well materials shall be conducted quarterly and in accordance with 30 TAC §331.64(g). Test materials shall be the same as those used in the wellhead, injection tubing, packer, and long string casing, and shall be continuously exposed to the waste fluids except when the well is taken out of service.
 - I. The permittee shall ensure that all waste analyses used for waste identification or verification and other analyses for environmental monitoring have been performed in accordance with methods specified in the current editions of United States Environmental Protection Agency (EPA) SW-846, ASTM standards or other methods accepted by the TCEQ. The permittee shall have a Quality Assurance/Quality Control (QA/QC) program that is consistent with EPA SW-846 and the TCEQ Quality Assurance Project Plan.
- IX. Record Keeping Requirements
- The permittee shall keep complete and accurate records as required by 30 TAC Chapters 305, 331, and 335.
- X. Financial Assurance for Well Closure
- In accordance with 30 TAC Chapter 37, §305.154(a)(9), and §§331.142-144, the permittee shall secure and maintain financial assurance, in a form approved by the Executive Director, in the amount of \$250,000 (cost estimate prepared May 2019 in current dollars). Adjustments to the cost estimates for plugging and abandonment in current dollars, and to financial assurance based thereon, shall be made in accordance with 30 TAC §331.143(d) and Chapter 37.
- XI. Additional Requirements
- A. The base of the wellhead shall be enclosed by a diked, impermeable pad or sump to protect the ground surface from spills and releases. Any liquid collected shall be disposed of in an appropriate manner.
 - B. Acceptance of this permit by the permittee constitutes an acknowledgment and agreement that the permittee will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

- C. This permit is subject to further orders and rules of the Commission. In accordance with the procedures for amendments and orders, the Commission may incorporate into permits already granted, any condition, restriction, limitation, or provision reasonably necessary for the administration and enforcement of Texas Water Code, Chapter 27 and Texas Health and Safety Code Chapter 361.
- D. This permit does not convey any property rights of any sort, nor any exclusive privilege, and does not become a vested right in the permittee.
- E. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of state or local law or regulations.
- F. The following rules are incorporated as terms and conditions of this permit by reference:
 - 1. 30 TAC Chapter 305, Consolidated Permits;
 - 2. 30 TAC Chapter 331, Underground Injection Control; and
 - 3. 30 TAC Chapter 335, Industrial Solid Waste and Municipal Hazardous Waste;
- G. The express incorporation of the above rules as terms and conditions of this permit does not relieve the permittee of an obligation to comply with all other laws or regulations which are applicable to the activities authorized by this permit.
- H. Incorporated Application Materials. This permit is based on, and the permittee shall follow, the plans and specifications contained in the Class I Underground Injection Control Application dated May 16, 2019 as revised on July 18, 2019, April 5, 2021, October 28, 2021, September 30, 2022, and January 20, 2023 which are hereby approved subject to the terms of this permit and any other orders of the TCEQ.

These materials are incorporated into this permit by reference as if fully set out herein. Any and all revisions to these elements shall become conditions of this permit upon the date of approval by the Commission.
- I. All pre-injection units servicing this well must be authorized under a TCEQ permit under 30 TAC Chapter 335 or must be exempt from the requirement for a permit under 30 TAC §335.2 or 30 TAC §335.53(f).
- J. The Texas solid waste registration (SWR) number for this site is 39098.



Permit No. WDW346

This permit supersedes
and replaces Permit
No. WDW346 issued
November 20, 2009.

Texas Commission on
Environmental Quality
Austin, Texas

Permit to Conduct
Class I Underground Injection
Under Provisions of Texas Water Code
Chapter 27 and Texas Health and Safety
Code Chapter 361

I. Permittee

US Ecology Winnie, LLC
26400 Wilber Road
Winnie, Texas 77665

II. Type of Permit

Initial _____ Renewal Amended

Commercial Noncommercial _____

Hazardous _____ Nonhazardous

Onsite Offsite

Authorizing Disposal of Waste from Captured Facility _____

Authorizing Disposal of Waste from Off-site Facilities Owned by Owner/Operator _____

III. Nature of Business

Commercial disposal of nonhazardous industrial and municipal wastes.

CONTINUED on Pages 2 through 6

The permittee is authorized to conduct injection in accordance with limitations, requirements, and other conditions set forth herein. This permit is granted subject to the rules and orders of the Commission, and the laws of the State of Texas. The permit will be in effect for ten years from the date of approval or until amended or revoked by the Commission. If this permit is appealed and the permittee does not commence any action authorized by this permit during judicial review, the term will not begin until judicial review is concluded.

DATE ISSUED:

For the Commission

IV. General Description and Location of Injection Activity

The disposal well is used to dispose of industrial and municipal nonhazardous wastes generated by the permittee's facility and wastes from other sources. The facility is located at 26400 Wilber Road, Winnie, Texas 77665. The well is located 11,476 feet from the west line and 1,443 feet from the south line of the Stephen Eaton League Survey, A-22, Latitude 29°44'45" North, Longitude 94°15'01" West, Jefferson County, Texas. The injection zone is within the Miocene, Caprock, Pliocene, and Lafayette Formations at the depths of 1,076 to 4,000 feet below ground level (BGL). The authorized injection interval is within the Caprock Formation at the depths of 1,147 to 1,551 feet BGL.

V. Character of the Waste Streams

A. Industrial and municipal nonhazardous waste authorized to be injected by this permit shall consist solely of the following waste streams:

1. Waste generated by the permittee and from other sources:
 - a. Water-based injection fluid generated from physical processing and chemical treatment of commingled Class I, II, and III nonhazardous industrial wastes and nonhazardous municipal landfill leachate.
2. Other associated wastes such as groundwater and rainfall contaminated by the above authorized wastes, spills of the above authorized wastes, and wash waters and solutions used in cleaning and servicing the waste disposal well system equipment which are compatible with the permitted waste streams, injection zone and well materials.
3. Wastes generated during well construction or closure of the well and associated facilities that are compatible with permitted the waste streams, injection zone and well materials.

B. The injection of wastes is limited to those wastes authorized in Provision V.A. above, into the Miocene, Caprock, Pliocene, and Lafayette Formation within the injection zone between the depths of 1,076 to 4,000 feet BGL.

C. The pH of injected waste streams shall be greater than 2.0 and less than 12.5.

D. Except when authorized by the Executive Director, the specific gravity of injected fluids shall not exceed 1.22 as measured at 75°F.

VI. Waste Streams Prohibited From Injection

Unless authorized by Provision V.A., the following waste streams are prohibited:

A. Hazardous wastes as defined under 40 CFR §261.3(a) through (d), issued pursuant to the Resource Conservation and Recovery Act and the Hazardous and Solid Waste Amendments, which are regulated by the Commission as authorized by the United States Environmental Protection Agency (EPA), including but not limited to any listed hazardous waste or a waste derived from the treatment, storage or disposal of a listed hazardous waste;

B. Any by-product material as defined by Texas Health and Safety Code §401.003(3);

- C. Any low-level radioactive waste as defined by Texas Health and Safety Code §401.004;
- D. Any naturally occurring radioactive material (NORM) waste as defined by Texas Health and Safety Code §401.003(26); and
- E. Any oil and gas NORM waste as defined by Texas Health & Safety Code §401.003(27).

VII. Operating Parameters

The well shall be operated in compliance with the requirements of 30 Texas Administrative Code (TAC) Chapters 305, 331, and 335; the plans and specifications of the permit application; and the following conditions:

- A. Surface injection pressure shall not cause pressure in the injection zone to:
 - 1. initiate any new fractures or propagate existing fractures in the injection zone;
 - 2. initiate new fractures or propagate existing fractures in the confining zone; or
 - 3. cause movement of fluid out of the injection zone that may contaminate underground sources of drinking water (USDWs), and fresh water.
- B. The operating surface injection pressure dependent on varying specific gravity shall not exceed as tabulated below:

Specific Gravity as measured at 75°F	Maximum Surface Injection Pressure (psig)
1.000 – 1.02	182
1.021 – 1.04	172
1.041 – 1.06	162
1.061 – 1.08	152
1.081 – 1.10	142
1.101 – 1.12	132
1.121 – 1.14	122
1.141 – 1.16	112
1.161 – 1.18	103
1.181 – 1.20	93
1.201 – 1.22	83

- C. For WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350, the maximum cumulative instantaneous injection rate shall not exceed 600 gallons per minute and the average cumulative injection rate, as calculated on a monthly basis, shall not exceed 295 gallons per minute.

- D. The cumulative volume of wastewater injected into WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350 shall not exceed 12,929,850 gallons per month, or 155,158,200 gallons per year, based on the average cumulative injection rate of 295 gallons per minute.
- E. A positive pressure of at least 100 psig over tubing injection pressures shall be maintained in the tubing-casing annulus for the purpose of leak detection. Temporary deviations from this requirement which are a part of normal well operations are authorized but may not exceed 15 minutes in duration. For 15 minutes after the pressure differential drops below 100 psig, the permittee shall conduct troubleshooting and proceed to restore a minimum 100 psig pressure differential. If a minimum 100 psig pressure differential cannot be achieved within 15 minutes, the permittee shall commence shut-in procedures on the well and notify the Texas Commission on Environmental Quality (TCEQ) in writing within 48 hours. The permittee may continue to operate the well under flow conditions that maintain a minimum 100 psig pressure differential.
- F. The permittee shall notify the Executive Director at least 24 hours prior to commencing any workover which involves taking the injection well out of service. Approval by the Executive Director shall be obtained before the permittee may begin work. Notification shall be in writing and shall include plans for the proposed work. The Executive Director may grant an exception in accordance with 30 TAC §331.63(i) when immediate action is required to comply with 30 TAC §331.63(b). Completion of the well outside the approved injection interval, by perforation of casing, setting of screen, or establishment of open hole section, requires that the permitted injection interval be changed according to 30 TAC §331.62(a)(3)(B) to include the depths of well completion. Pressure control equipment shall be installed and maintained during workovers which involve the removal of tubing.

VIII. Monitoring and Testing Requirements

- A. Monitoring and testing shall be in compliance with the requirements of 30 TAC §305.125, §331.64, the plans and specifications of the permit application, and the following conditions.
- B. The integrity of the long string casing, injection tubing, and annular seal shall be tested by means of an approved pressure test with a liquid or gas annually and whenever there has been a well workover. The integrity of the cement within the injection zone shall be tested by means of an approved radioactive tracer survey annually. A radioactive tracer survey may be required after workovers that have the potential to damage the cement within the injection zone.
- C. The pressure buildup in the injection zone shall be monitored annually, including at a minimum, a shutdown of the well for a sufficient time to conduct a valid observation of the pressure fall-off curve.
- D. A temperature log, noise log, oxygen activation log or other approved log is required at least once every five years to test for fluid movement along the entire borehole.
- E. A casing inspection, casing evaluation, or other approved log shall be run whenever the owner or operator conducts a workover in which the injection string is pulled,

unless the Executive Director waives this requirement due to well construction or other factors which limit the test's reliability, or based upon the satisfactory results of a casing inspection log run within the previous five years. The Executive Director may require that a casing inspection log be run every five years if there is sufficient reason to believe the integrity of the long string casing of the well may be adversely affected by naturally occurring or man-made events.

- F. Injection fluids shall be tested in accordance with 30 TAC §331.64(b) and the approved waste analysis plan.
 - G. The pH and specific gravity of the injected waste shall be monitored continuously at a minimum frequency of at least once every 24 hours and whenever the waste stream changes.
 - H. Corrosion monitoring of well materials shall be conducted quarterly and in accordance with 30 TAC §331.64(g). Test materials shall be the same as those used in the wellhead, injection tubing, packer, and long string casing, and shall be continuously exposed to the waste fluids except when the well is taken out of service.
 - I. The permittee shall ensure that all waste analyses used for waste identification or verification and other analyses for environmental monitoring have been performed in accordance with methods specified in the current editions of United States Environmental Protection Agency (EPA) SW-846, ASTM standards or other methods accepted by the TCEQ. The permittee shall have a Quality Assurance/Quality Control (QA/QC) program that is consistent with EPA SW-846 and the TCEQ Quality Assurance Project Plan.
- IX. Record Keeping Requirements
- The permittee shall keep complete and accurate records as required by 30 TAC Chapters 305, 331, and 335.
- X. Financial Assurance for Well Closure
- In accordance with 30 TAC Chapter 37, §305.154(a)(9), and §§331.142-144, the permittee shall secure and maintain financial assurance, in a form approved by the Executive Director, in the amount of \$274,958 (cost estimate prepared March 2021 in current dollars). Adjustments to the cost estimates for plugging and abandonment in current dollars, and to financial assurance based thereon, shall be made in accordance with 30 TAC §331.143(d) and Chapter 37.
- XI. Additional Requirements
- A. The base of the wellhead shall be enclosed by a diked, impermeable pad or sump to protect the ground surface from spills and releases. Any liquid collected shall be disposed of in an appropriate manner.
 - B. Acceptance of this permit by the permittee constitutes an acknowledgment and agreement that the permittee will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

- C. This permit is subject to further orders and rules of the Commission. In accordance with the procedures for amendments and orders, the Commission may incorporate into permits already granted, any condition, restriction, limitation, or provision reasonably necessary for the administration and enforcement of Texas Water Code, Chapter 27 and Texas Health and Safety Code Chapter 361.
- D. This permit does not convey any property rights of any sort, nor any exclusive privilege, and does not become a vested right in the permittee.
- E. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of state or local law or regulations.
- F. The following rules are incorporated as terms and conditions of this permit by reference:
 - 1. 30 TAC Chapter 305, Consolidated Permits;
 - 2. 30 TAC Chapter 331, Underground Injection Control; and
 - 3. 30 TAC Chapter 335, Industrial Solid Waste and Municipal Hazardous Waste;
- G. The express incorporation of the above rules as terms and conditions of this permit does not relieve the permittee of an obligation to comply with all other laws or regulations which are applicable to the activities authorized by this permit.
- H. Incorporated Application Materials. This permit is based on, and the permittee shall follow, the plans and specifications contained in the Class I Underground Injection Control Application dated May 16, 2019 as revised on July 18, 2019, April 5, 2021, October 28, 2021, September 30, 2022, and January 20, 2023 which are hereby approved subject to the terms of this permit and any other orders of the TCEQ.

These materials are incorporated into this permit by reference as if fully set out herein. Any and all revisions to these elements shall become conditions of this permit upon the date of approval by the Commission.
- I. All pre-injection units servicing this well must be authorized under a TCEQ permit under 30 TAC Chapter 335 or must be exempt from the requirement for a permit under 30 TAC §335.2 or 30 TAC §335.53(f).
- J. The Texas solid waste registration (SWR) number for this site is 39098.



Permit No. WDW347

This permit supersedes
and replaces Permit
No. WDW347 issued
November 20, 2009.

Texas Commission on
Environmental Quality
Austin, Texas

Permit to Conduct
Class I Underground Injection
Under Provisions of Texas Water Code
Chapter 27 and Texas Health and Safety
Code Chapter 361

I. Permittee

US Ecology Winnie, LLC
26400 Wilber Road
Winnie, Texas 77665

II. Type of Permit

Initial _____ Renewal Amended

Commercial Noncommercial _____

Hazardous _____ Nonhazardous

Onsite Offsite

Authorizing Disposal of Waste from Captured Facility _____

Authorizing Disposal of Waste from Off-site Facilities Owned by Owner/Operator _____

III. Nature of Business

Commercial disposal of nonhazardous industrial and municipal wastes.

CONTINUED on Pages 2 through 7

The permittee is authorized to conduct injection in accordance with limitations, requirements, and other conditions set forth herein. This permit is granted subject to the rules and orders of the Commission, and the laws of the State of Texas. The permit will be in effect for ten years from the date of approval or until amended or revoked by the Commission. If this permit is appealed and the permittee does not commence any action authorized by this permit during judicial review, the term will not begin until judicial review is concluded.

DATE ISSUED:

For the Commission

IV. General Description and Location of Injection Activity

The disposal well will be used to dispose of industrial and municipal nonhazardous wastes generated by the permittee's facility and wastes from other sources. The facility is located at 26400 Wilber Road, Winnie, Texas 77665. The well will be located approximately 11,681.3 feet from the west line and approximately 1,520.3 feet from the south line of the Stephen Eaton League Survey, A-22, Latitude 29°44'46" North, Longitude 94°14'59" West, Jefferson County, Texas. The injection zone is within the Miocene, Caprock, Pliocene, and Lafayette Formations at the approximate depths of 1,100 to 4,000 feet below ground level (BGL). The authorized injection interval is within the Caprock Formation at the approximate depths of 1,580 to 1,980 feet BGL.

V. Drilling and Completion Requirements

- A. The drilling and completion of the well shall be done in accordance with 30 Texas Administrative Code (TAC) Section (§) 331.62, the plans and specifications of the permit application, and the following conditions.
- B. The permittee shall set and cement surface casing to a minimum subsurface depth of 750 feet below ground level, and long string casing into or through the injection zone in order to properly protect each underground source of drinking water (USDW) or freshwater aquifer.
- C. Mechanical integrity shall be demonstrated prior to authorization by the Executive Director to conduct injection operations.
- D. Any changes to the plans and specifications in the original application shall be approved in writing by the Executive Director that said changes provide protection standards equivalent to or greater than the original design criteria.

VI. Character of the Waste Streams

- A. Industrial and municipal nonhazardous waste authorized to be injected by this permit shall consist solely of the following waste streams:
 - 1. Waste generated by the permittee and from other sources:
 - a. Water-based injection fluid generated from physical processing and chemical treatment of commingled Class I, II, and III nonhazardous industrial wastes and nonhazardous municipal landfill leachate.
 - 2. Other associated wastes such as groundwater and rainfall contaminated by the above authorized wastes, spills of the above authorized wastes, and wash waters and solutions used in cleaning and servicing the waste disposal well system equipment which are compatible with the permitted waste streams, injection zone and well materials.
 - 3. Wastes generated during well construction or closure of the well and associated facilities that are compatible with permitted the waste streams, injection zone and well materials.

- B. The injection of wastes is limited to those wastes authorized in Provision VI.A. above, into the Miocene, Caprock, Pliocene, and Lafayette Formation within the injection zone between the approximate depths of 1,100 to 4,000 feet BGL.
- C. The pH of injected waste streams shall be greater than 2.0 and less than 12.5.
- D. Except when authorized by the Executive Director, the specific gravity of injected fluids shall not exceed 1.22 as measured at 75°F.

VII. Waste Streams Prohibited From Injection

Unless authorized by Provision VI.A., the following waste streams are prohibited:

- A. Hazardous wastes as defined under 40 CFR §261.3(a) through (d), issued pursuant to the Resource Conservation and Recovery Act and the Hazardous and Solid Waste Amendments, which are regulated by the Commission as authorized by the United States Environmental Protection Agency (EPA), including but not limited to any listed hazardous waste or a waste derived from the treatment, storage or disposal of a listed hazardous waste;
- B. Any by-product material as defined by Texas Health and Safety Code §401.003(3);
- C. Any low-level radioactive waste as defined by Texas Health and Safety Code §401.004;
- D. Any naturally occurring radioactive material (NORM) waste as defined by Texas Health and Safety Code §401.003(26); and
- E. Any oil and gas NORM waste as defined by Texas Health & Safety Code §401.003(27).

VIII. Operating Parameters

The well shall be operated in compliance with the requirements of 30 Texas Administrative Code (TAC) Chapters 305, 331, and 335; the plans and specifications of the permit application; and the following conditions:

- A. Surface injection pressure shall not cause pressure in the injection zone to:
 - 1. initiate any new fractures or propagate existing fractures in the injection zone;
 - 2. initiate new fractures or propagate existing fractures in the confining zone; or
 - 3. cause movement of fluid out of the injection zone that may contaminate underground sources of drinking water (USDWs), and fresh water.
- B. The operating surface injection pressure dependent on varying specific gravity shall not exceed as tabulated below:

Specific Gravity as measured at 75°F	Maximum Surface Injection Pressure (psig)
1.000 – 1.02	289

1.021 – 1.04	275
1.041 – 1.06	261
1.061 – 1.08	247
1.081 – 1.10	234
1.101 – 1.12	220
1.121 – 1.14	206
1.141 – 1.16	193
1.161 – 1.18	179
1.181 – 1.20	165
1.201 – 1.22	152

- A. For WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350, the maximum cumulative instantaneous injection rate shall not exceed 600 gallons per minute and the average cumulative injection rate, as calculated on a monthly basis, shall not exceed 295 gallons per minute.
- B. The cumulative volume of wastewater injected into WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350 shall not exceed 12,929,850 gallons per month, or 155,158,200 gallons per year, based on the average cumulative injection rate of 295 gallons per minute.
- C. A positive pressure of at least 100 psig over tubing injection pressures shall be maintained in the tubing-casing annulus for the purpose of leak detection. Temporary deviations from this requirement which are a part of normal well operations are authorized but may not exceed 15 minutes in duration. For 15 minutes after the pressure differential drops below 100 psig, the permittee shall conduct troubleshooting and proceed to restore a minimum 100 psig pressure differential. If a minimum 100 psig pressure differential cannot be achieved within 15 minutes, the permittee shall commence shut-in procedures on the well and notify the Texas Commission on Environmental Quality (TCEQ) in writing within 48 hours. The permittee may continue to operate the well under flow conditions that maintain a minimum 100 psig pressure differential.
- D. The permittee shall notify the Executive Director at least 24 hours prior to commencing any workover which involves taking the injection well out of service. Approval by the Executive Director shall be obtained before the permittee may begin work. Notification shall be in writing and shall include plans for the proposed work. The Executive Director may grant an exception in accordance with 30 TAC §331.63(i) when immediate action is required to comply with 30 TAC §331.63(b). Completion of the well outside the approved injection interval, by perforation of casing, setting of screen, or establishment of open hole section, requires that the permitted injection interval be changed according to 30 TAC §331.62(a)(3)(B) to include the depths of well completion. Pressure control equipment shall be installed and maintained during workovers which involve the removal of tubing.

IX. Monitoring and Testing Requirements

- A. Monitoring and testing shall be in compliance with the requirements of 30 TAC §305.125, §331.64, the plans and specifications of the permit application, and the following conditions.
- B. The integrity of the long string casing, injection tubing, and annular seal shall be tested by means of an approved pressure test with a liquid or gas annually and whenever there has been a well workover. The integrity of the cement within the injection zone shall be tested by means of an approved radioactive tracer survey annually. A radioactive tracer survey may be required after workovers that have the potential to damage the cement within the injection zone.
- C. The pressure buildup in the injection zone shall be monitored annually, including at a minimum, a shutdown of the well for a sufficient time to conduct a valid observation of the pressure fall-off curve.
- D. A temperature log, noise log, oxygen activation log or other approved log is required at least once every five years to test for fluid movement along the entire borehole.
- E. A casing inspection, casing evaluation, or other approved log shall be run whenever the owner or operator conducts a workover in which the injection string is pulled, unless the Executive Director waives this requirement due to well construction or other factors which limit the test's reliability, or based upon the satisfactory results of a casing inspection log run within the previous five years. The Executive Director may require that a casing inspection log be run every five years if there is sufficient reason to believe the integrity of the long string casing of the well may be adversely affected by naturally occurring or man-made events.
- F. Injection fluids shall be tested in accordance with 30 TAC §331.64(b) and the approved waste analysis plan.
- G. The pH and specific gravity of the injected waste shall be monitored continuously at a minimum frequency of at least once every 24 hours and whenever the waste stream changes.
- H. Corrosion monitoring of well materials shall be conducted quarterly and in accordance with 30 TAC §331.64(g). Test materials shall be the same as those used in the wellhead, injection tubing, packer, and long string casing, and shall be continuously exposed to the waste fluids except when the well is taken out of service.
- I. The permittee shall ensure that all waste analyses used for waste identification or verification and other analyses for environmental monitoring have been performed in accordance with methods specified in the current editions of United States Environmental Protection Agency (EPA) SW-846, ASTM standards or other methods accepted by the TCEQ. The permittee shall have a Quality Assurance/Quality Control (QA/QC) program that is consistent with EPA SW-846 and the TCEQ Quality Assurance Project Plan.

X. Record Keeping Requirements

The permittee shall keep complete and accurate records as required by 30 TAC Chapters 305, 331, and 335.

XI. Financial Assurance for Well Closure

In accordance with 30 TAC Chapter 37, §305.154(a)(9), and §§331.142-144, the permittee shall secure and maintain financial assurance, in a form approved by the Executive Director, in the amount of \$262,000 (cost estimate prepared September 2022 in current dollars). Adjustments to the cost estimates for plugging and abandonment in current dollars, and to financial assurance based thereon, shall be made in accordance with 30 TAC §331.143(d) and Chapter 37. Financial assurance shall be obtained at least 60 days prior to the commencement of drilling of the well.

XII. Additional Requirements

- A. The base of the wellhead shall be enclosed by a diked, impermeable pad or sump to protect the ground surface from spills and releases. Any liquid collected shall be disposed of in an appropriate manner.
- B. Acceptance of this permit by the permittee constitutes an acknowledgment and agreement that the permittee will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- C. This permit is subject to further orders and rules of the Commission. In accordance with the procedures for amendments and orders, the Commission may incorporate into permits already granted, any condition, restriction, limitation, or provision reasonably necessary for the administration and enforcement of Texas Water Code, Chapter 27 and Texas Health and Safety Code Chapter 361.
- D. This permit does not convey any property rights of any sort, nor any exclusive privilege, and does not become a vested right in the permittee.
- E. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of state or local law or regulations.
- F. The following rules are incorporated as terms and conditions of this permit by reference:
 - 1. 30 TAC Chapter 305, Consolidated Permits;
 - 2. 30 TAC Chapter 331, Underground Injection Control; and
 - 3. 30 TAC Chapter 335, Industrial Solid Waste and Municipal Hazardous Waste;
- G. The express incorporation of the above rules as terms and conditions of this permit does not relieve the permittee of an obligation to comply with all other laws or regulations which are applicable to the activities authorized by this permit.
- H. Incorporated Application Materials. This permit is based on, and the permittee shall follow, the plans and specifications contained in the Class I Underground Injection Control Application dated May 16, 2019 as revised on July 18, 2019, April 5, 2021, October 28, 2021, September 30, 2022, and January 20, 2023 which are

hereby approved subject to the terms of this permit and any other orders of the TCEQ.

These materials are incorporated into this permit by reference as if fully set out herein. Any and all revisions to these elements shall become conditions of this permit upon the date of approval by the Commission.

- I. All pre-injection units servicing this well must be authorized under a TCEQ permit under 30 TAC Chapter 335 or must be exempt from the requirement for a permit under 30 TAC §335.2 or 30 TAC §335.53(f).
- J. The Texas solid waste registration (SWR) number for this site is 39098.



Permit No. WDW348

This permit supersedes
and replaces Permit
No. WDW348 issued
November 20, 2009.

Texas Commission on
Environmental Quality
Austin, Texas

Permit to Conduct
Class I Underground Injection
Under Provisions of Texas Water Code
Chapter 27 and Texas Health and Safety
Code Chapter 361

I. Permittee

US Ecology Winnie, LLC
26400 Wilber Road
Winnie, Texas 77665

II. Type of Permit

Initial _____ Renewal Amended

Commercial Noncommercial _____

Hazardous _____ Nonhazardous

Onsite Offsite

Authorizing Disposal of Waste from Captured Facility _____

Authorizing Disposal of Waste from Off-site Facilities Owned by Owner/Operator _____

III. Nature of Business

Commercial disposal of nonhazardous industrial and municipal wastes.

CONTINUED on Pages 2 through 7

The permittee is authorized to conduct injection in accordance with limitations, requirements, and other conditions set forth herein. This permit is granted subject to the rules and orders of the Commission, and the laws of the State of Texas. The permit will be in effect for ten years from the date of approval or until amended or revoked by the Commission. If this permit is appealed and the permittee does not commence any action authorized by this permit during judicial review, the term will not begin until judicial review is concluded.

DATE ISSUED:

For the Commission

IV. General Description and Location of Injection Activity

The disposal well will be used to dispose of industrial and municipal nonhazardous wastes generated by the permittee's facility and wastes from other sources. The facility is located at 26400 Wilber Road, Winnie, Texas 77665. The well will be located approximately 11,942.5 feet from the west line and approximately 1,213.9 feet from the south line of the Stephen Eaton League Survey, A-22, Latitude 29°44'43" North, Longitude 94°14'56" West, Jefferson County, Texas. The injection zone is within the Miocene, Caprock, Pliocene, and Lafayette Formations at the approximate depths of 950 to 4,000 feet below ground level (BGL). The authorized injection interval is within the Caprock Formation at the approximate depths of 1,130 to 1,530 feet BGL.

V. Drilling and Completion Requirements

- A. The drilling and completion of the well shall be done in accordance with 30 Texas Administrative Code (TAC) Section (§) 331.62, the plans and specifications of the permit application, and the following conditions.
- B. The permittee shall set and cement surface casing to a minimum subsurface depth of 750 feet below ground level, and long string casing into or through the injection zone in order to properly protect each underground source of drinking water (USDW) or freshwater aquifer.
- C. Mechanical integrity shall be demonstrated prior to authorization by the Executive Director to conduct injection operations.
- D. Any changes to the plans and specifications in the original application shall be approved in writing by the Executive Director that said changes provide protection standards equivalent to or greater than the original design criteria.

VI. Character of the Waste Streams

- A. Industrial and municipal nonhazardous waste authorized to be injected by this permit shall consist solely of the following waste streams:
 1. Waste generated by the permittee and from other sources:
 - a. Water-based injection fluid generated from physical processing and chemical treatment of commingled Class I, II, and III nonhazardous industrial wastes and nonhazardous municipal landfill leachate.
 2. Other associated wastes such as groundwater and rainfall contaminated by the above authorized wastes, spills of the above authorized wastes, and wash waters and solutions used in cleaning and servicing the waste disposal well system equipment which are compatible with the permitted waste streams, injection zone and well materials.
 3. Wastes generated during well construction or closure of the well and associated facilities that are compatible with permitted the waste streams, injection zone and well materials.

- B. The injection of wastes is limited to those wastes authorized in Provision VI.A. above, into the Miocene, Caprock, Pliocene, and Lafayette Formation within the injection zone between the approximate depths of 950 to 4,000 feet BGL.
- C. The pH of injected waste streams shall be greater than 2.0 and less than 12.5.
- D. Except when authorized by the Executive Director, the specific gravity of injected fluids shall not exceed 1.22 as measured at 75°F.

VII. Waste Streams Prohibited From Injection

Unless authorized by Provision VI.A., the following waste streams are prohibited:

- A. Hazardous wastes as defined under 40 CFR §261.3(a) through (d), issued pursuant to the Resource Conservation and Recovery Act and the Hazardous and Solid Waste Amendments, which are regulated by the Commission as authorized by the United States Environmental Protection Agency (EPA), including but not limited to any listed hazardous waste or a waste derived from the treatment, storage or disposal of a listed hazardous waste;
- B. Any by-product material as defined by Texas Health and Safety Code §401.003(3);
- C. Any low-level radioactive waste as defined by Texas Health and Safety Code §401.004;
- D. Any naturally occurring radioactive material (NORM) waste as defined by Texas Health and Safety Code §401.003(26); and
- E. Any oil and gas NORM waste as defined by Texas Health & Safety Code §401.003(27).

VIII. Operating Parameters

The well shall be operated in compliance with the requirements of 30 Texas Administrative Code (TAC) Chapters 305, 331, and 335; the plans and specifications of the permit application; and the following conditions:

- A. Surface injection pressure shall not cause pressure in the injection zone to:
 - 1. initiate any new fractures or propagate existing fractures in the injection zone;
 - 2. initiate new fractures or propagate existing fractures in the confining zone; or
 - 3. cause movement of fluid out of the injection zone that may contaminate underground sources of drinking water (USDWs), and fresh water.
- B. The operating surface injection pressure dependent on varying specific gravity shall not exceed as tabulated below:

Specific Gravity as measured at 75°F	Maximum Surface Injection Pressure (psig)
1.000 – 1.02	178

1.021 – 1.04	168
1.041 – 1.06	158
1.061 – 1.08	149
1.081 – 1.10	139
1.101 – 1.12	129
1.121 – 1.14	119
1.141 – 1.16	109
1.161 – 1.18	100
1.181 – 1.20	90
1.201 – 1.22	80

- A. For WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350, the maximum cumulative instantaneous injection rate shall not exceed 600 gallons per minute and the average cumulative injection rate, as calculated on a monthly basis, shall not exceed 295 gallons per minute.
- B. The cumulative volume of wastewater injected into WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350 shall not exceed 12,929,850 gallons per month, or 155,158,200 gallons per year, based on the average cumulative injection rate of 295 gallons per minute.
- C. A positive pressure of at least 100 psig over tubing injection pressures shall be maintained in the tubing-casing annulus for the purpose of leak detection. Temporary deviations from this requirement which are a part of normal well operations are authorized but may not exceed 15 minutes in duration. For 15 minutes after the pressure differential drops below 100 psig, the permittee shall conduct troubleshooting and proceed to restore a minimum 100 psig pressure differential. If a minimum 100 psig pressure differential cannot be achieved within 15 minutes, the permittee shall commence shut-in procedures on the well and notify the Texas Commission on Environmental Quality (TCEQ) in writing within 48 hours. The permittee may continue to operate the well under flow conditions that maintain a minimum 100 psig pressure differential.
- D. The permittee shall notify the Executive Director at least 24 hours prior to commencing any workover which involves taking the injection well out of service. Approval by the Executive Director shall be obtained before the permittee may begin work. Notification shall be in writing and shall include plans for the proposed work. The Executive Director may grant an exception in accordance with 30 TAC §331.63(i) when immediate action is required to comply with 30 TAC §331.63(b). Completion of the well outside the approved injection interval, by perforation of casing, setting of screen, or establishment of open hole section, requires that the permitted injection interval be changed according to 30 TAC §331.62(a)(3)(B) to include the depths of well completion. Pressure control equipment shall be installed and maintained during workovers which involve the removal of tubing.

IX. Monitoring and Testing Requirements

- A. Monitoring and testing shall be in compliance with the requirements of 30 TAC §305.125, §331.64, the plans and specifications of the permit application, and the following conditions.
- B. The integrity of the long string casing, injection tubing, and annular seal shall be tested by means of an approved pressure test with a liquid or gas annually and whenever there has been a well workover. The integrity of the cement within the injection zone shall be tested by means of an approved radioactive tracer survey annually. A radioactive tracer survey may be required after workovers that have the potential to damage the cement within the injection zone.
- C. The pressure buildup in the injection zone shall be monitored annually, including at a minimum, a shutdown of the well for a sufficient time to conduct a valid observation of the pressure fall-off curve.
- D. A temperature log, noise log, oxygen activation log or other approved log is required at least once every five years to test for fluid movement along the entire borehole.
- E. A casing inspection, casing evaluation, or other approved log shall be run whenever the owner or operator conducts a workover in which the injection string is pulled, unless the Executive Director waives this requirement due to well construction or other factors which limit the test's reliability, or based upon the satisfactory results of a casing inspection log run within the previous five years. The Executive Director may require that a casing inspection log be run every five years if there is sufficient reason to believe the integrity of the long string casing of the well may be adversely affected by naturally occurring or man-made events.
- F. Injection fluids shall be tested in accordance with 30 TAC §331.64(b) and the approved waste analysis plan.
- G. The pH and specific gravity of the injected waste shall be monitored continuously at a minimum frequency of at least once every 24 hours and whenever the waste stream changes.
- H. Corrosion monitoring of well materials shall be conducted quarterly and in accordance with 30 TAC §331.64(g). Test materials shall be the same as those used in the wellhead, injection tubing, packer, and long string casing, and shall be continuously exposed to the waste fluids except when the well is taken out of service.
- I. The permittee shall ensure that all waste analyses used for waste identification or verification and other analyses for environmental monitoring have been performed in accordance with methods specified in the current editions of United States Environmental Protection Agency (EPA) SW-846, ASTM standards or other methods accepted by the TCEQ. The permittee shall have a Quality Assurance/Quality Control (QA/QC) program that is consistent with EPA SW-846 and the TCEQ Quality Assurance Project Plan.

X. Record Keeping Requirements

The permittee shall keep complete and accurate records as required by 30 TAC Chapters 305, 331, and 335.

XI. Financial Assurance for Well Closure

In accordance with 30 TAC Chapter 37, §305.154(a)(9), and §§331.142-144, the permittee shall secure and maintain financial assurance, in a form approved by the Executive Director, in the amount of \$259,000 (cost estimate prepared September 2022 in current dollars). Adjustments to the cost estimates for plugging and abandonment in current dollars, and to financial assurance based thereon, shall be made in accordance with 30 TAC §331.143(d) and Chapter 37. Financial assurance shall be obtained at least 60 days prior to the commencement of drilling of the well.

XII. Additional Requirements

- A. The base of the wellhead shall be enclosed by a diked, impermeable pad or sump to protect the ground surface from spills and releases. Any liquid collected shall be disposed of in an appropriate manner.
- B. Acceptance of this permit by the permittee constitutes an acknowledgment and agreement that the permittee will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- C. This permit is subject to further orders and rules of the Commission. In accordance with the procedures for amendments and orders, the Commission may incorporate into permits already granted, any condition, restriction, limitation, or provision reasonably necessary for the administration and enforcement of Texas Water Code, Chapter 27 and Texas Health and Safety Code Chapter 361.
- D. This permit does not convey any property rights of any sort, nor any exclusive privilege, and does not become a vested right in the permittee.
- E. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of state or local law or regulations.
- F. The following rules are incorporated as terms and conditions of this permit by reference:
 - 1. 30 TAC Chapter 305, Consolidated Permits;
 - 2. 30 TAC Chapter 331, Underground Injection Control; and
 - 3. 30 TAC Chapter 335, Industrial Solid Waste and Municipal Hazardous Waste;
- G. The express incorporation of the above rules as terms and conditions of this permit does not relieve the permittee of an obligation to comply with all other laws or regulations which are applicable to the activities authorized by this permit.
- H. Incorporated Application Materials. This permit is based on, and the permittee shall follow, the plans and specifications contained in the Class I Underground Injection Control Application dated May 16, 2019 as revised on July 18, 2019, April 5, 2021, October 28, 2021, September 30, 2022, and January 20, 2023 which are

hereby approved subject to the terms of this permit and any other orders of the TCEQ.

These materials are incorporated into this permit by reference as if fully set out herein. Any and all revisions to these elements shall become conditions of this permit upon the date of approval by the Commission.

- I. All pre-injection units servicing this well must be authorized under a TCEQ permit under 30 TAC Chapter 335 or must be exempt from the requirement for a permit under 30 TAC §335.2 or 30 TAC §335.53(f).
- J. The Texas solid waste registration (SWR) number for this site is 39098.



Permit No. WDW349

This permit supersedes
and replaces Permit
No. WDW349 issued
November 20, 2009.

Texas Commission on
Environmental Quality
Austin, Texas

Permit to Conduct
Class I Underground Injection
Under Provisions of Texas Water Code
Chapter 27 and Texas Health and Safety
Code Chapter 361

I. Permittee

US Ecology Winnie, LLC
26400 Wilber Road
Winnie, Texas 77665

II. Type of Permit

Initial _____ Renewal Amended

Commercial Noncommercial _____

Hazardous _____ Nonhazardous

Onsite Offsite

Authorizing Disposal of Waste from Captured Facility _____

Authorizing Disposal of Waste from Off-site Facilities Owned by Owner/Operator _____

III. Nature of Business

Commercial disposal of nonhazardous industrial and municipal wastes.

CONTINUED on Pages 2 through 7

The permittee is authorized to conduct injection in accordance with limitations, requirements, and other conditions set forth herein. This permit is granted subject to the rules and orders of the Commission, and the laws of the State of Texas. The permit will be in effect for ten years from the date of approval or until amended or revoked by the Commission. If this permit is appealed and the permittee does not commence any action authorized by this permit during judicial review, the term will not begin until judicial review is concluded.

DATE ISSUED:

For the Commission

IV. General Description and Location of Injection Activity

The disposal well will be used to dispose of industrial and municipal nonhazardous wastes generated by the permittee's facility and wastes from other sources. The facility is located at 26400 Wilber Road, Winnie, Texas 77665. The well will be located approximately 13,522.5 feet from the west line and approximately 522.7 feet from the south line of the Stephen Eaton League Survey, A-22, Latitude 29°44'37" North, Longitude 94°14'38" West, Jefferson County, Texas. The injection zone is within the Miocene, Caprock, Pliocene, and Lafayette Formations at the approximate depths of 925 to 4,000 feet below ground level (BGL). The authorized injection interval is within the Caprock Formation at the approximate depths of 1,180 to 1,580 feet BGL.

V. Drilling and Completion Requirements

- A. The drilling and completion of the well shall be done in accordance with 30 Texas Administrative Code (TAC) Section (§) 331.62, the plans and specifications of the permit application, and the following conditions.
- B. The permittee shall set and cement surface casing to a minimum subsurface depth of 750 feet below ground level, and long string casing into or through the injection zone in order to properly protect each underground source of drinking water (USDW) or freshwater aquifer.
- C. Mechanical integrity shall be demonstrated prior to authorization by the Executive Director to conduct injection operations.
- D. Any changes to the plans and specifications in the original application shall be approved in writing by the Executive Director that said changes provide protection standards equivalent to or greater than the original design criteria.

VI. Character of the Waste Streams

- A. Industrial and municipal nonhazardous waste authorized to be injected by this permit shall consist solely of the following waste streams:
 1. Waste generated by the permittee and from other sources:
 - a. Water-based injection fluid generated from physical processing and chemical treatment of commingled Class I, II, and III nonhazardous industrial wastes and nonhazardous municipal landfill leachate.
 2. Other associated wastes such as groundwater and rainfall contaminated by the above authorized wastes, spills of the above authorized wastes, and wash waters and solutions used in cleaning and servicing the waste disposal well system equipment which are compatible with the permitted waste streams, injection zone and well materials.
 3. Wastes generated during well construction or closure of the well and associated facilities that are compatible with permitted the waste streams, injection zone and well materials.

- B. The injection of wastes is limited to those wastes authorized in Provision VI.A. above, into the Miocene, Caprock, Pliocene, and Lafayette Formation within the injection zone between the approximate depths of 925 to 4,000 feet BGL
- C. The pH of injected waste streams shall be greater than 2.0 and less than 12.5.
- D. Except when authorized by the Executive Director, the specific gravity of injected fluids shall not exceed 1.22 as measured at 75°F.

VII. Waste Streams Prohibited From Injection

Unless authorized by Provision VI.A., the following waste streams are prohibited:

- A. Hazardous wastes as defined under 40 CFR §261.3(a) through (d), issued pursuant to the Resource Conservation and Recovery Act and the Hazardous and Solid Waste Amendments, which are regulated by the Commission as authorized by the United States Environmental Protection Agency (EPA), including but not limited to any listed hazardous waste or a waste derived from the treatment, storage or disposal of a listed hazardous waste;
- B. Any by-product material as defined by Texas Health and Safety Code §401.003(3);
- C. Any low-level radioactive waste as defined by Texas Health and Safety Code §401.004;
- D. Any naturally occurring radioactive material (NORM) waste as defined by Texas Health and Safety Code §401.003(26); and
- E. Any oil and gas NORM waste as defined by Texas Health & Safety Code §401.003(27).

VIII. Operating Parameters

The well shall be operated in compliance with the requirements of 30 Texas Administrative Code (TAC) Chapters 305, 331, and 335; the plans and specifications of the permit application; and the following conditions:

- A. Surface injection pressure shall not cause pressure in the injection zone to:
 - 1. initiate any new fractures or propagate existing fractures in the injection zone;
 - 2. initiate new fractures or propagate existing fractures in the confining zone; or
 - 3. cause movement of fluid out of the injection zone that may contaminate underground sources of drinking water (USDWs), and fresh water.
- B. The operating surface injection pressure dependent on varying specific gravity shall not exceed as tabulated below:

Specific Gravity as measured at 75°F	Maximum Surface Injection Pressure (psig)
1.000 – 1.02	190

1.021 – 1.04	180
1.041 – 1.06	170
1.061 – 1.08	160
1.081 – 1.10	149
1.101 – 1.12	139
1.121 – 1.14	129
1.141 – 1.16	119
1.161 – 1.18	108
1.181 – 1.20	98
1.201 – 1.22	88

- A. For WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350, the maximum cumulative instantaneous injection rate shall not exceed 600 gallons per minute and the average cumulative injection rate, as calculated on a monthly basis, shall not exceed 295 gallons per minute.
- B. The cumulative volume of wastewater injected into WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350 shall not exceed 12,929,850 gallons per month, or 155,158,200 gallons per year, based on the average cumulative injection rate of 295 gallons per minute.
- C. A positive pressure of at least 100 psig over tubing injection pressures shall be maintained in the tubing-casing annulus for the purpose of leak detection. Temporary deviations from this requirement which are a part of normal well operations are authorized but may not exceed 15 minutes in duration. For 15 minutes after the pressure differential drops below 100 psig, the permittee shall conduct troubleshooting and proceed to restore a minimum 100 psig pressure differential. If a minimum 100 psig pressure differential cannot be achieved within 15 minutes, the permittee shall commence shut-in procedures on the well and notify the Texas Commission on Environmental Quality (TCEQ) in writing within 48 hours. The permittee may continue to operate the well under flow conditions that maintain a minimum 100 psig pressure differential.
- D. The permittee shall notify the Executive Director at least 24 hours prior to commencing any workover which involves taking the injection well out of service. Approval by the Executive Director shall be obtained before the permittee may begin work. Notification shall be in writing and shall include plans for the proposed work. The Executive Director may grant an exception in accordance with 30 TAC §331.63(i) when immediate action is required to comply with 30 TAC §331.63(b). Completion of the well outside the approved injection interval, by perforation of casing, setting of screen, or establishment of open hole section, requires that the permitted injection interval be changed according to 30 TAC §331.62(a)(3)(B) to include the depths of well completion. Pressure control equipment shall be installed and maintained during workovers which involve the removal of tubing.

IX. Monitoring and Testing Requirements

- A. Monitoring and testing shall be in compliance with the requirements of 30 TAC §305.125, §331.64, the plans and specifications of the permit application, and the following conditions.
- B. The integrity of the long string casing, injection tubing, and annular seal shall be tested by means of an approved pressure test with a liquid or gas annually and whenever there has been a well workover. The integrity of the cement within the injection zone shall be tested by means of an approved radioactive tracer survey annually. A radioactive tracer survey may be required after workovers that have the potential to damage the cement within the injection zone.
- C. The pressure buildup in the injection zone shall be monitored annually, including at a minimum, a shutdown of the well for a sufficient time to conduct a valid observation of the pressure fall-off curve.
- D. A temperature log, noise log, oxygen activation log or other approved log is required at least once every five years to test for fluid movement along the entire borehole.
- E. A casing inspection, casing evaluation, or other approved log shall be run whenever the owner or operator conducts a workover in which the injection string is pulled, unless the Executive Director waives this requirement due to well construction or other factors which limit the test's reliability, or based upon the satisfactory results of a casing inspection log run within the previous five years. The Executive Director may require that a casing inspection log be run every five years if there is sufficient reason to believe the integrity of the long string casing of the well may be adversely affected by naturally occurring or man-made events.
- F. Injection fluids shall be tested in accordance with 30 TAC §331.64(b) and the approved waste analysis plan.
- G. The pH and specific gravity of the injected waste shall be monitored continuously at a minimum frequency of at least once every 24 hours and whenever the waste stream changes.
- H. Corrosion monitoring of well materials shall be conducted quarterly and in accordance with 30 TAC §331.64(g). Test materials shall be the same as those used in the wellhead, injection tubing, packer, and long string casing, and shall be continuously exposed to the waste fluids except when the well is taken out of service.
- I. The permittee shall ensure that all waste analyses used for waste identification or verification and other analyses for environmental monitoring have been performed in accordance with methods specified in the current editions of United States Environmental Protection Agency (EPA) SW-846, ASTM standards or other methods accepted by the TCEQ. The permittee shall have a Quality Assurance/Quality Control (QA/QC) program that is consistent with EPA SW-846 and the TCEQ Quality Assurance Project Plan.

X. Record Keeping Requirements

The permittee shall keep complete and accurate records as required by 30 TAC Chapters 305, 331, and 335.

XI. Financial Assurance for Well Closure

In accordance with 30 TAC Chapter 37, §305.154(a)(9), and §§331.142-144, the permittee shall secure and maintain financial assurance, in a form approved by the Executive Director, in the amount of \$259,000 (cost estimate prepared September 2022 in current dollars). Adjustments to the cost estimates for plugging and abandonment in current dollars, and to financial assurance based thereon, shall be made in accordance with 30 TAC §331.143(d) and Chapter 37. Financial assurance shall be obtained at least 60 days prior to the commencement of drilling of the well.

XII. Additional Requirements

- A. The base of the wellhead shall be enclosed by a diked, impermeable pad or sump to protect the ground surface from spills and releases. Any liquid collected shall be disposed of in an appropriate manner.
- B. Acceptance of this permit by the permittee constitutes an acknowledgment and agreement that the permittee will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- C. This permit is subject to further orders and rules of the Commission. In accordance with the procedures for amendments and orders, the Commission may incorporate into permits already granted, any condition, restriction, limitation, or provision reasonably necessary for the administration and enforcement of Texas Water Code, Chapter 27 and Texas Health and Safety Code Chapter 361.
- D. This permit does not convey any property rights of any sort, nor any exclusive privilege, and does not become a vested right in the permittee.
- E. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of state or local law or regulations.
- F. The following rules are incorporated as terms and conditions of this permit by reference:
 - 1. 30 TAC Chapter 305, Consolidated Permits;
 - 2. 30 TAC Chapter 331, Underground Injection Control; and
 - 3. 30 TAC Chapter 335, Industrial Solid Waste and Municipal Hazardous Waste;
- G. The express incorporation of the above rules as terms and conditions of this permit does not relieve the permittee of an obligation to comply with all other laws or regulations which are applicable to the activities authorized by this permit.
- H. Incorporated Application Materials. This permit is based on, and the permittee shall follow, the plans and specifications contained in the Class I Underground

Injection Control Application dated May 16, 2019 as revised on July 18, 2019, April 5, 2021, October 28, 2021, September 30, 2022, and January 20, 2023 which are hereby approved subject to the terms of this permit and any other orders of the TCEQ.

These materials are incorporated into this permit by reference as if fully set out herein. Any and all revisions to these elements shall become conditions of this permit upon the date of approval by the Commission.

- I. All pre-injection units servicing this well must be authorized under a TCEQ permit under 30 TAC Chapter 335 or must be exempt from the requirement for a permit under 30 TAC §335.2 or 30 TAC §335.53(f).
- J. The Texas solid waste registration (SWR) number for this site is 39098.



Permit No. WDW350

This permit supersedes
and replaces Permit
No. WDW350 issued
November 20, 2009.

Texas Commission on
Environmental Quality
Austin, Texas

Permit to Conduct
Class I Underground Injection
Under Provisions of Texas Water Code
Chapter 27 and Texas Health and Safety
Code Chapter 361

I. Permittee

US Ecology Winnie, LLC
26400 Wilber Road
Winnie, Texas 77665

II. Type of Permit

Initial _____ Renewal Amended

Commercial Noncommercial _____

Hazardous _____ Nonhazardous

Onsite Offsite

Authorizing Disposal of Waste from Captured Facility _____

Authorizing Disposal of Waste from Off-site Facilities Owned by Owner/Operator _____

III. Nature of Business

Commercial disposal of nonhazardous industrial and municipal wastes.

CONTINUED on Pages 2 through 7

The permittee is authorized to conduct injection in accordance with limitations, requirements, and other conditions set forth herein. This permit is granted subject to the rules and orders of the Commission, and the laws of the State of Texas. The permit will be in effect for ten years from the date of approval or until amended or revoked by the Commission. If this permit is appealed and the permittee does not commence any action authorized by this permit during judicial review, the term will not begin until judicial review is concluded.

DATE ISSUED:

For the Commission

IV. General Description and Location of Injection Activity

The disposal well will be used to dispose of industrial and municipal nonhazardous wastes generated by the permittee's facility and wastes from other sources. The facility is located at 26400 Wilber Road, Winnie, Texas 77665. The well will be located approximately 13,430.1 feet from the west line and approximately 129.8 feet from the south line of the Stephen Eaton League Survey, A-22, Latitude 29°44'33" North, Longitude 94°14'39" West, Jefferson County, Texas. The injection zone is within the Miocene, Caprock, Pliocene, and Lafayette Formations at the approximate depths of 1,000 to 4,000 feet below ground level (BGL). The authorized injection interval is within the Caprock Formation at the approximate depths of 1,290 to 1,690 feet BGL.

V. Drilling and Completion Requirements

- A. The drilling and completion of the well shall be done in accordance with 30 Texas Administrative Code (TAC) Section (§) 331.62, the plans and specifications of the permit application, and the following conditions.
- B. The permittee shall set and cement surface casing to a minimum subsurface depth of 750 feet below ground level, and long string casing into or through the injection zone in order to properly protect each underground source of drinking water (USDW) or freshwater aquifer.
- C. Mechanical integrity shall be demonstrated prior to authorization by the Executive Director to conduct injection operations.
- D. Any changes to the plans and specifications in the original application shall be approved in writing by the Executive Director that said changes provide protection standards equivalent to or greater than the original design criteria.

VI. Character of the Waste Streams

- A. Industrial and municipal nonhazardous waste authorized to be injected by this permit shall consist solely of the following waste streams:
 1. Waste generated by the permittee and from other sources:
 - a. Water-based injection fluid generated from physical processing and chemical treatment of commingled Class I, II, and III nonhazardous industrial wastes and nonhazardous municipal landfill leachate.
 2. Other associated wastes such as groundwater and rainfall contaminated by the above authorized wastes, spills of the above authorized wastes, and wash waters and solutions used in cleaning and servicing the waste disposal well system equipment which are compatible with the permitted waste streams, injection zone and well materials.
 3. Wastes generated during well construction or closure of the well and associated facilities that are compatible with permitted the waste streams, injection zone and well materials.

- B. The injection of wastes is limited to those wastes authorized in Provision VI.A. above, into the Miocene, Caprock, Pliocene, and Lafayette Formation within the injection zone between the approximate depths of 1,000 to 4,000 feet BGL .
- C. The pH of injected waste streams shall be greater than 2.0 and less than 12.5.
- D. Except when authorized by the Executive Director, the specific gravity of injected fluids shall not exceed 1.22 as measured at 75°F.

VII. Waste Streams Prohibited From Injection

Unless authorized by Provision VI.A., the following waste streams are prohibited:

- A. Hazardous wastes as defined under 40 CFR §261.3(a) through (d), issued pursuant to the Resource Conservation and Recovery Act and the Hazardous and Solid Waste Amendments, which are regulated by the Commission as authorized by the United States Environmental Protection Agency (EPA), including but not limited to any listed hazardous waste or a waste derived from the treatment, storage or disposal of a listed hazardous waste;
- B. Any by-product material as defined by Texas Health and Safety Code §401.003(3);
- C. Any low-level radioactive waste as defined by Texas Health and Safety Code §401.004;
- D. Any naturally occurring radioactive material (NORM) waste as defined by Texas Health and Safety Code §401.003(26); and
- E. Any oil and gas NORM waste as defined by Texas Health & Safety Code §401.003(27).

VIII. Operating Parameters

The well shall be operated in compliance with the requirements of 30 Texas Administrative Code (TAC) Chapters 305, 331, and 335; the plans and specifications of the permit application; and the following conditions:

- A. Surface injection pressure shall not cause pressure in the injection zone to:
 - 1. initiate any new fractures or propagate existing fractures in the injection zone;
 - 2. initiate new fractures or propagate existing fractures in the confining zone; or
 - 3. cause movement of fluid out of the injection zone that may contaminate underground sources of drinking water (USDWs), and fresh water.
- B. The operating surface injection pressure dependent on varying specific gravity shall not exceed as tabulated below:

Specific Gravity as measured at 75°F	Maximum Surface Injection Pressure (psig)
1.000 – 1.02	217

1.021 – 1.04	206
1.041 – 1.06	195
1.061 – 1.08	184
1.081 – 1.10	173
1.101 – 1.12	161
1.121 – 1.14	150
1.141 – 1.16	139
1.161 – 1.18	128
1.181 – 1.20	117
1.201 – 1.22	105

- C. For WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350, the maximum cumulative instantaneous injection rate shall not exceed 600 gallons per minute and the average cumulative injection rate, as calculated on a monthly basis, shall not exceed 295 gallons per minute.
- D. The cumulative volume of wastewater injected into WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350 shall not exceed 12,929,850 gallons per month, or 155,158,200 gallons per year, based on the average cumulative injection rate of 295 gallons per minute.
- E. A positive pressure of at least 100 psig over tubing injection pressures shall be maintained in the tubing-casing annulus for the purpose of leak detection. Temporary deviations from this requirement which are a part of normal well operations are authorized but may not exceed 15 minutes in duration. For 15 minutes after the pressure differential drops below 100 psig, the permittee shall conduct troubleshooting and proceed to restore a minimum 100 psig pressure differential. If a minimum 100 psig pressure differential cannot be achieved within 15 minutes, the permittee shall commence shut-in procedures on the well and notify the Texas Commission on Environmental Quality (TCEQ) in writing within 48 hours. The permittee may continue to operate the well under flow conditions that maintain a minimum 100 psig pressure differential.
- F. The permittee shall notify the Executive Director at least 24 hours prior to commencing any workover which involves taking the injection well out of service. Approval by the Executive Director shall be obtained before the permittee may begin work. Notification shall be in writing and shall include plans for the proposed work. The Executive Director may grant an exception in accordance with 30 TAC §331.63(i) when immediate action is required to comply with 30 TAC §331.63(b). Completion of the well outside the approved injection interval, by perforation of casing, setting of screen, or establishment of open hole section, requires that the permitted injection interval be changed according to 30 TAC §331.62(a)(3)(B) to include the depths of well completion. Pressure control equipment shall be installed and maintained during workovers which involve the removal of tubing.

IX. Monitoring and Testing Requirements

- A. Monitoring and testing shall be in compliance with the requirements of 30 TAC §305.125, §331.64, the plans and specifications of the permit application, and the following conditions.
- B. The integrity of the long string casing, injection tubing, and annular seal shall be tested by means of an approved pressure test with a liquid or gas annually and whenever there has been a well workover. The integrity of the cement within the injection zone shall be tested by means of an approved radioactive tracer survey annually. A radioactive tracer survey may be required after workovers that have the potential to damage the cement within the injection zone.
- C. The pressure buildup in the injection zone shall be monitored annually, including at a minimum, a shutdown of the well for a sufficient time to conduct a valid observation of the pressure fall-off curve.
- D. A temperature log, noise log, oxygen activation log or other approved log is required at least once every five years to test for fluid movement along the entire borehole.
- E. A casing inspection, casing evaluation, or other approved log shall be run whenever the owner or operator conducts a workover in which the injection string is pulled, unless the Executive Director waives this requirement due to well construction or other factors which limit the test's reliability, or based upon the satisfactory results of a casing inspection log run within the previous five years. The Executive Director may require that a casing inspection log be run every five years if there is sufficient reason to believe the integrity of the long string casing of the well may be adversely affected by naturally occurring or man-made events.
- F. Injection fluids shall be tested in accordance with 30 TAC §331.64(b) and the approved waste analysis plan.
- G. The pH and specific gravity of the injected waste shall be monitored continuously at a minimum frequency of at least once every 24 hours and whenever the waste stream changes.
- H. Corrosion monitoring of well materials shall be conducted quarterly and in accordance with 30 TAC §331.64(g). Test materials shall be the same as those used in the wellhead, injection tubing, packer, and long string casing, and shall be continuously exposed to the waste fluids except when the well is taken out of service.
- I. The permittee shall ensure that all waste analyses used for waste identification or verification and other analyses for environmental monitoring have been performed in accordance with methods specified in the current editions of United States Environmental Protection Agency (EPA) SW-846, ASTM standards or other methods accepted by the TCEQ. The permittee shall have a Quality Assurance/Quality Control (QA/QC) program that is consistent with EPA SW-846 and the TCEQ Quality Assurance Project Plan.

X. Record Keeping Requirements

The permittee shall keep complete and accurate records as required by 30 TAC Chapters 305, 331, and 335.

XI. Financial Assurance for Well Closure

In accordance with 30 TAC Chapter 37, §305.154(a)(9), and §§331.142-144, the permittee shall secure and maintain financial assurance, in a form approved by the Executive Director, in the amount of \$260,000 (cost estimate prepared September 2022 in current dollars). Adjustments to the cost estimates for plugging and abandonment in current dollars, and to financial assurance based thereon, shall be made in accordance with 30 TAC §331.143(d) and Chapter 37. Financial assurance shall be obtained at least 60 days prior to the commencement of drilling of the well.

XII. Additional Requirements

- A. The base of the wellhead shall be enclosed by a diked, impermeable pad or sump to protect the ground surface from spills and releases. Any liquid collected shall be disposed of in an appropriate manner.
- B. Acceptance of this permit by the permittee constitutes an acknowledgment and agreement that the permittee will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- C. This permit is subject to further orders and rules of the Commission. In accordance with the procedures for amendments and orders, the Commission may incorporate into permits already granted, any condition, restriction, limitation, or provision reasonably necessary for the administration and enforcement of Texas Water Code, Chapter 27 and Texas Health and Safety Code Chapter 361.
- D. This permit does not convey any property rights of any sort, nor any exclusive privilege, and does not become a vested right in the permittee.
- E. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of state or local law or regulations.
- F. The following rules are incorporated as terms and conditions of this permit by reference:
 - 1. 30 TAC Chapter 305, Consolidated Permits;
 - 2. 30 TAC Chapter 331, Underground Injection Control; and
 - 3. 30 TAC Chapter 335, Industrial Solid Waste and Municipal Hazardous Waste;
- G. The express incorporation of the above rules as terms and conditions of this permit does not relieve the permittee of an obligation to comply with all other laws or regulations which are applicable to the activities authorized by this permit.
- H. Incorporated Application Materials. This permit is based on, and the permittee shall follow, the plans and specifications contained in the Class I Underground

Injection Control Application dated May 16, 2019 as revised on July 18, 2019, April 5, 2021, October 28, 2021, September 30, 2022, and January 20, 2023 which are hereby approved subject to the terms of this permit and any other orders of the TCEQ.

These materials are incorporated into this permit by reference as if fully set out herein. Any and all revisions to these elements shall become conditions of this permit upon the date of approval by the Commission.

- I. All pre-injection units servicing this well must be authorized under a TCEQ permit under 30 TAC Chapter 335 or must be exempt from the requirement for a permit under 30 TAC §335.2 or 30 TAC §335.53(f).
- J. The Texas solid waste registration (SWR) number for this site is 39098.



Compliance History Report

Compliance History Report for CN605576347, RN100610468, Rating Year 2019 which includes Compliance History (CH) components from September 1, 2014, through August 31, 2019.

Customer, Respondent, or Owner/Operator: CN605576347, Us Ecology Winnie, LLC **Classification:** NOT APPLICABLE **Rating:** N/A

Regulated Entity: RN100610468, US ECOLOGY WINNIE **Classification:** NOT APPLICABLE **Rating:** N/A

Complexity Points: N/A **Repeat Violator:** N/A

CH Group: 11 - Waste Management (Excluding Landfills)

Location: 26400 WILBER RD WINNIE, TX 77665-8745, JEFFERSON COUNTY

TCEQ Region: REGION 10 - BEAUMONT

ID Number(s):

UNDERGROUND INJECTION CONTROL PERMIT WDW344	UNDERGROUND INJECTION CONTROL PERMIT WDW345
UNDERGROUND INJECTION CONTROL PERMIT WDW346	UNDERGROUND INJECTION CONTROL PERMIT WDW347
UNDERGROUND INJECTION CONTROL PERMIT WDW348	UNDERGROUND INJECTION CONTROL PERMIT WDW349
UNDERGROUND INJECTION CONTROL PERMIT WDW350	INDUSTRIAL AND HAZARDOUS WASTE EPA ID
	TXR000036731
INDUSTRIAL AND HAZARDOUS WASTE SOLID WASTE REGISTRATION # (SWR) 39098	INDUSTRIAL AND HAZARDOUS WASTE PERMIT 39098

Compliance History Period: September 01, 2014 to August 31, 2019 **Rating Year:** 2019 **Rating Date:** 09/01/2019

Date Compliance History Report Prepared: June 10, 2019

Agency Decision Requiring Compliance History: Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.

Component Period Selected: May 16, 2014 to May 16, 2019

TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.

Name: Tamara Young **Phone:** (512) 239-6582

Site and Owner/Operator History:

- 1) Has the site been in existence and/or operation for the full five year compliance period? YES
- 2) Has there been a (known) change in ownership/operator of the site during the compliance period? NO

Components (Multimedia) for the Site Are Listed in Sections A - J

A. Final Orders, court judgments, and consent decrees:

N/A

B. Criminal convictions:

N/A

C. Chronic excessive emissions events:

N/A

D. The approval dates of investigations (CEDS Inv. Track. No.):

Item 1	December 17, 2014	(1208751)
Item 2	February 11, 2015	(1223097)
Item 3	November 02, 2015	(1288365)
Item 4	February 08, 2016	(1305835)
Item 5	February 09, 2016	(1308383)
Item 6	April 12, 2016	(1323066)
Item 7	August 17, 2016	(1355995)
Item 8	September 30, 2016	(1364375)

Item 9	October 04, 2016	(1364683)
Item 10	November 17, 2016	(1375326)
Item 11	December 16, 2016	(1381684)
Item 12	March 06, 2017	(1396140)
Item 13	November 09, 2017	(1449251)
Item 14	April 17, 2018	(1479777)
Item 15	May 03, 2018	(1481784)
Item 16	November 12, 2018	(1526042)
Item 17	December 20, 2018	(1536657)
Item 18	March 08, 2019	(1551105)
Item 19	April 10, 2019	(1554347)

E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

N/A

F. Environmental audits:

N/A

G. Type of environmental management systems (EMSs):

N/A

H. Voluntary on-site compliance assessment dates:

N/A

I. Participation in a voluntary pollution reduction program:

N/A

J. Early compliance:

N/A

Sites Outside of Texas:

N/A



Compliance History Report

Compliance History Report for CN605576347, RN100610468, Rating Year 2020 which includes Compliance History (CH) components from September 1, 2015, through August 31, 2020.

Customer, Respondent, or Owner/Operator:	CN605576347, US Ecology Winnie, LLC	Classification: HIGH	Rating: 0.00
Regulated Entity:	RN100610468, US ECOLOGY WINNIE	Classification: HIGH	Rating: 0.00
Complexity Points:	8	Repeat Violator: NO	
CH Group:	11 - Waste Management (Excluding Landfills)		
Location:	26400 WILBER RD WINNIE, TX 77665-8745, JEFFERSON COUNTY		
TCEQ Region:	REGION 10 - BEAUMONT		

ID Number(s):

UNDERGROUND INJECTION CONTROL PERMIT WDW344	UNDERGROUND INJECTION CONTROL PERMIT WDW345
UNDERGROUND INJECTION CONTROL PERMIT WDW346	UNDERGROUND INJECTION CONTROL PERMIT WDW347
UNDERGROUND INJECTION CONTROL PERMIT WDW348	UNDERGROUND INJECTION CONTROL PERMIT WDW349
UNDERGROUND INJECTION CONTROL PERMIT WDW350	INDUSTRIAL AND HAZARDOUS WASTE EPA ID

INDUSTRIAL AND HAZARDOUS WASTE SOLID WASTE REGISTRATION # (SWR) 39098	INDUSTRIAL AND HAZARDOUS WASTE PERMIT 39098
--	--

Compliance History Period: September 01, 2015 to August 31, 2020 **Rating Year:** 2020 **Rating Date:** 09/01/2020

Date Compliance History Report Prepared: October 01, 2020

Agency Decision Requiring Compliance History: Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.

Component Period Selected: September 01, 2015 to August 31, 2020

TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.

Name: PBairu **Phone:** (512) 239-6648

Site and Owner/Operator History:

- 1) Has the site been in existence and/or operation for the full five year compliance period? YES
- 2) Has there been a (known) change in ownership/operator of the site during the compliance period? NO

Components (Multimedia) for the Site Are Listed in Sections A - J

A. Final Orders, court judgments, and consent decrees:

N/A

B. Criminal convictions:

N/A

C. Chronic excessive emissions events:

N/A

D. The approval dates of investigations (CCEDS Inv. Track. No.):

Item 1	November 02, 2015	(1288365)
Item 2	February 08, 2016	(1305835)
Item 3	February 09, 2016	(1308383)
Item 4	April 12, 2016	(1323066)
Item 5	August 17, 2016	(1355995)
Item 6	September 30, 2016	(1364375)
Item 7	October 04, 2016	(1364683)
Item 8	November 17, 2016	(1375326)

Item 9	December 16, 2016	(1381684)
Item 10	March 06, 2017	(1396140)
Item 11	April 06, 2017	(26263)
Item 12	November 09, 2017	(1449251)
Item 13	April 17, 2018	(1479777)
Item 14	May 03, 2018	(1481784)
Item 15	November 12, 2018	(1526042)
Item 16	December 20, 2018	(1536657)
Item 17	March 08, 2019	(1551105)
Item 18	April 10, 2019	(1554347)
Item 19	November 14, 2019	(1606032)
Item 20	January 28, 2020	(1623802)
Item 21	February 27, 2020	(1631750)

E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

N/A

F. Environmental audits:

N/A

G. Type of environmental management systems (EMSs):

N/A

H. Voluntary on-site compliance assessment dates:

N/A

I. Participation in a voluntary pollution reduction program:

N/A

J. Early compliance:

N/A

Sites Outside of Texas:

N/A



Compliance History Report

Compliance History Report for CN605576347, RN100610468, Rating Year 2022 which includes Compliance History (CH) components from September 1, 2017, through August 31, 2022.

Customer, Respondent, or Owner/Operator:	CN605576347, US Ecology Winnie, LLC	Classification: HIGH	Rating: 0.00
Regulated Entity:	RN100610468, US ECOLOGY WINNIE	Classification: HIGH	Rating: 0.00
Complexity Points:	8	Repeat Violator: NO	
CH Group:	11 - Waste Management (Excluding Landfills)		
Location:	26400 WILBER RD WINNIE, TX 77665-8745, JEFFERSON COUNTY		
TCEQ Region:	REGION 10 - BEAUMONT		

ID Number(s):

UNDERGROUND INJECTION CONTROL PERMIT WDW344	UNDERGROUND INJECTION CONTROL PERMIT WDW345
UNDERGROUND INJECTION CONTROL PERMIT WDW346	UNDERGROUND INJECTION CONTROL PERMIT WDW347
UNDERGROUND INJECTION CONTROL PERMIT WDW348	UNDERGROUND INJECTION CONTROL PERMIT WDW349
UNDERGROUND INJECTION CONTROL PERMIT WDW350	INDUSTRIAL AND HAZARDOUS WASTE EPA ID

INDUSTRIAL AND HAZARDOUS WASTE SOLID WASTE REGISTRATION # (SWR) 39098	INDUSTRIAL AND HAZARDOUS WASTE PERMIT 39098
--	--

Compliance History Period: September 01, 2017 to August 31, 2022 **Rating Year:** 2022 **Rating Date:** 09/01/2022

Date Compliance History Report Prepared: February 13, 2023

Agency Decision Requiring Compliance History: Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.

Component Period Selected: September 01, 2017 to August 31, 2022

TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.

Name: PBairu **Phone:** (512) 239-6648

Site and Owner/Operator History:

- 1) Has the site been in existence and/or operation for the full five year compliance period? YES
- 2) Has there been a (known) change in ownership/operator of the site during the compliance period? NO

Components (Multimedia) for the Site Are Listed in Sections A - J

A. Final Orders, court judgments, and consent decrees:

N/A

B. Criminal convictions:

N/A

C. Chronic excessive emissions events:

N/A

D. The approval dates of investigations (CCEDS Inv. Track. No.):

Item 1	November 09, 2017	(1449251)
Item 2	April 17, 2018	(1479777)
Item 3	May 03, 2018	(1481784)
Item 4	November 12, 2018	(1526042)
Item 5	December 20, 2018	(1536657)
Item 6	March 08, 2019	(1551105)
Item 7	April 10, 2019	(1554347)
Item 8	November 14, 2019	(1606032)

Item 9	January 28, 2020	(1623802)
Item 10	February 27, 2020	(1631750)
Item 11	November 12, 2020	(1686599)
Item 12	February 23, 2021	(1702448)
Item 13	April 01, 2021	(1706934)
Item 14	April 21, 2021	(1709177)
Item 15	June 23, 2021	(1736806)
Item 16	July 15, 2021	(1739332)
Item 17	November 03, 2021	(1770841)
Item 18	December 07, 2021	(1775153)
Item 19	December 14, 2021	(1780974)
Item 20	February 24, 2022	(1794967)
Item 21	April 15, 2022	(1809907)
Item 22	May 05, 2022	(1811684)
Item 23	May 13, 2022	(1812700)
Item 24	May 31, 2022	(1818051)
Item 25	July 14, 2022	(1824068)
Item 26	August 08, 2022	(1823759)

E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

N/A

F. Environmental audits:

N/A

G. Type of environmental management systems (EMSs):

N/A

H. Voluntary on-site compliance assessment dates:

N/A

I. Participation in a voluntary pollution reduction program:

N/A

J. Early compliance:

N/A

Sites Outside of Texas:

N/A

**TCEQ UNDERGROUND INJECTION CONTROL
PERMIT NOS. WDW344, WDW345, WDW346, WDW347, WDW348,
WDW349 AND WDW350**

APPLICATION BY US ECOLOGY WINNIE, LLC FOR UIC PERMIT NOS. WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 AND WDW350	§ § § § § §	BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
--	--	---

EXECUTIVE DIRECTOR’S RESPONSE TO PUBLIC COMMENT

The Executive Director of the Texas Commission on Environmental Quality (the Commission or TCEQ) files this Response to Public Comments on the application by US Ecology Winnie, LLC (Applicant or US Ecology) for renewal and major amendment of seven nonhazardous commercial Class I Underground Injection Control (UIC) Permits Nos. WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350, for the disposal by injection of nonhazardous industrial and municipal wastes received from off-site sources on a commercial basis and generated on-site (the Application).

Before an application is approved, Title 30 Texas Administrative Code (30 TAC) Section (§) 55.156 requires that the Executive Director prepare a response to all timely, relevant, and material, or significant comments received. This response addresses all timely public comments received, whether or not withdrawn.

I. Public Comments Received

The Office of Chief Clerk received timely comments submitted on behalf of Bruce Pipkin, Grayson Pipkin, and Pipkin Ranch Holdings, LP, from attorney, Mark Sparks.

II. Background

A. Facility Description

US Ecology operates an existing commercial nonhazardous UIC facility located at 26400 Wilber Road, Winnie, Texas 77665 in Jefferson County. US Ecology disposes nonhazardous industrial solid waste and nonhazardous municipal solid waste by injection in three constructed UIC wells, WDW344, WDW345 and WDW346. Nonhazardous Industrial Solid Waste Permit No. 39098 authorizes US Ecology to receive on a commercial basis, store, and process nonhazardous industrial solid waste and municipal solid waste received from off-site on a commercial basis, and nonhazardous industrial solid waste generated on-site, prior to disposal by injection. Permit No. 39098 is outside of the scope of the Executive Director’s consideration of this Application. Wastes disposed via injection include nonhazardous municipal

landfill leachate, aqueous nonhazardous Class 1, 2, and 3 industrial solid waste and contaminated groundwater and rainwater. Four of seven permitted injection wells, WDW347, WDW348, WDW349, and WDW350 have not been installed.

B. Application Description

The application, if granted, would authorize the continued operation of Class I injection wells WDW344, WDW345, and WDW346 which are installed, and the construction and operation of Class I injection wells WDW347, WDW348, WDW349, and WDW350. Waste that would continue to be authorized for disposal by injection include water-based injection fluid generated from physical processing and chemical treatment of commingled Class 1, 2, and 3 nonhazardous industrial wastes, nonhazardous municipal landfill leachate, contaminated groundwater, contaminated rainwater, and wastes generated from well construction, cleaning, servicing, and closure. The Application also requests to lower the base of the injection zone to 4,000 feet below ground level (BGL) for all permits, to lower the top of the injection zone for WDW346 from 952 feet BGL to 1,076 feet BGL, and to change the Maximum Allowable Surface Injection Pressure (MASIP) for WDW346, WDW347, WDW348, WDW349, and WDW350 to allow a range of maximum pressures based upon the varying specific gravity of the injected fluids.

The Executive Director has prepared draft permits that would authorize the continued disposal by injection of nonhazardous industrial solid wastes and nonhazardous municipal solid wastes and revise the injection zones and MASIP as requested. The proposed permits are required by the Injection Well Act, Texas Water Code § 27.011 and Solid Waste Disposal Act, § 361.061 of the Texas Health & Safety Code. The draft permits have been prepared in accordance with applicable requirements of 30 TAC Chapters 37, 281, 305, 331, and 335 which have been adopted under the authority of the Texas Water Code, Chapters 5 and 27 and Texas Health and Safety Code, Chapter 361.

C. Procedural Background

The TCEQ received this Application on May 28, 2019, and declared it administratively complete on August 13, 2019. The Notice of Receipt of Application and Intent to Obtain a Nonhazardous Waste UIC Permit Renewal was published in English on September 7, 2019, in the *Beaumont Enterprise* in Jefferson County, Texas.

The Executive Director completed the technical review of the Application on March 9, 2023, and prepared draft permits. The Notice of Application and Preliminary Decision for Nonhazardous Waste UIC Permit Renewal and Amendment was published in English on April 12, 2023, in the *Beaumont Enterprise* in Jefferson County, Texas. The public comment period ended on May 12, 2023.

This Application was filed on or after September 1, 2015; therefore, this Application is subject to the procedural requirements adopted pursuant to House Bill

801, 76th Legislature (1999) and Senate Bill 709, 84th Legislature (2015), both implemented by the Commission in its rules in 30 TAC Chapters 39, 50, and 55.

III. Access to Rules, Laws, and Information

- The Texas Secretary of State webpage is sos.state.tx.us.
- TCEQ rules in Title 30 of the Texas Administrative Code are available at sos.state.tx.us/tac/ by selecting “View the current Texas Administrative Code” on the right, and then selecting “Title 30 Environmental Quality.”
- Texas statutes are available at statutes.capitol.texas.gov.
- Federal rules in Title 40 of the Code of Federal Regulations are available at the EPA’s public webpage at epa.gov/laws-regulations/regulations.
- Federal environmental laws are available at the EPA’s public webpage at epa.gov/laws-regulations/laws-and-executive-orders.
- General information about TCEQ can be found at the Commission’s public webpage at tceq.texas.gov.
- General information about TCEQ and information about the underground injection control permitting process is available at the Commission’s public webpage at tceq.texas.gov.
- Information about the underground injection control permitting process is available from the TCEQ Public Education Program at 1-800-687-4040.
- You may receive a paper copy of this Response by contacting the TCEQ Office of the Chief Clerk, at 512-239-3300.
- The Application, the Executive Director’s preliminary decision, and the draft permits are available for viewing and copying at the Beaumont Public Library, 801 Pearl Street, Beaumont, Texas 77701.
- Commission records for this application and draft permits are available for viewing and copying in the Office of the Chief Clerk (OCC) at the TCEQ main office in Austin at 12100 Park 35 Circle, Building F, 1st Floor. Certain documents located in OCC may also be viewed in the Commissioner’s Integrated Database at: www14.tceq.texas.gov/epic/eCID/

IV. Comments and Responses

Comment No. 1:

Pipkin Ranch Holdings, LP, Bruce Fletcher Pipkin, and Grayson Eden Pipkin (the Pipkins) commented that the application seeks to “increase the pore space” for injection by 4000 feet.

Response No. 1:

The Application does not seek to increase the pore space; the Application does request to increase the vertical extent of the injection zone for each permitted injection well. Identifying “pore space” is neither an application requirement nor a consideration when determining whether to grant an application for a Class I injection well. “Pore space” means “the open space in a rock or soil, considered collectively.”

(Dictionary of Geological Terms, Third Edition – Robert L. Bates and Julia A. Jackson, editors. 1984).

To ensure that injection operations do not pollute underground sources of drinking water (USDWs) and freshwater aquifers, all Class I injection wells must be sited, designed, constructed, operated, and closed in accordance with the requirements in 30 TAC Chapter 331. An application for a Class I UIC permit must include a Geology Report which includes maps and cross-sections which demonstrate the geologic structure of the local area and describes the regional geologic setting, and which provides physical characteristics of the lithography such as the permeability, porosity, and thickness of the receiving formation where the injection well is or will be installed. (30 TAC §§ 305.45(a)(8) and 331.121(a)(2)(D)). The Geology Report must also indicate “the general vertical and lateral limits of underground sources of drinking water (USDWs) and freshwater aquifers, their positions relative to the injection formation and the direction of water movement, where known, in each USDW or freshwater aquifer which may be affected by the proposed injection.” (30 TAC § 331.121(a)(2)(D)). USDW is defined in 30 TAC § 331.2(117).

An application for a Class I UIC permit must establish an injection interval into which waste is/would be authorized to be injected/directly emplaced and identify and establish an injection zone where injected waste is/would be authorized to come to be located. An application must also identify a confining layer or layers that prevent or would prevent injected waste from migrating to a USDW and identify and establish an area of review as defined in 30 TAC § 331.2(13). (30 TAC §331.42(a)(1)). Additionally, an application for a Class I UIC permit must include a review of all artificial penetrations within the area of review that could provide a conduit for upward fluid migration. (30 TAC §§ 331.62, 331.63 and 331.121(c)(4)). Further, an applicant must demonstrate that the injection zone and interval are isolated from base of the USDW by impermeable strata in accordance with 30 TAC § 331.121(a)(4)(A)-(C).

An “injection zone” is “a formation, a group of formations, or a part of a formation that receives fluid through a well.” (30 TAC § 331.2(60)). An “injection interval” is the portion of the injection zone into which injected waste is authorized to be directly emplaced. (30 TAC § 331.2(57)(Definitions)). An application for a Class I Injection well must establish the approximate top and the approximate base of injection zone and identify the injection interval in accordance with 30 TAC §§ 331.62, 331.63, and 331.121. In addition to identifying the approximate vertical extent of the injection zone, an application must demonstrate that the injection zone has sufficient permeability, porosity, thickness, and areal extent to prevent a movement of injected fluids that could pollute an USDW or freshwater aquifer.

The Application establishes a 2.5-mile area of review. (Application, Section VIII.E). Additionally, the Application represents that the placement of the injection wells will not result in upward movement of injected fluids via vertical conduits, such as faults or improperly constructed or plugged wells or boreholes and would not contaminate an aquifer containing usable quality water. (*Id.*). Further, the Application

represents that the artificial penetrations identified within the 2.5-mile area of review are properly constructed or have been properly plugged and do not require corrective action. (*Id.*).

Waste fluids injected into any of US Ecology's seven wells are presently authorized and would be authorized to be located in approximately the same injection zone. The injection rates and volumes that are presently authorized and that would be authorized are calculated on a cumulative basis, based on injection activities in all of US Ecology's installed wells that are utilized for waste disposal (Application, Section VI.C.1, 2 & 3). (*See also* Final Draft Permit Nos. WDW344 through WDW350 Section VII, Operating Parameters).

Final Draft Permit Nos. WDW344 through WDW350 would increase the vertical extent of the authorized injection zone, but not by 4,000 feet. The Application requests to *lower* the top of the injection zone in Permit WDW346 from 952 feet below ground level (BGL) to 1,076 feet BGL and to lower the base of the injection zone from a maximum depth of 1,980 feet BGL to 4,000 feet BGL (Application, Section I.I).

The permitted injection zone authorized by UIC Permit Nos. WDW344 through WDW350 is within the Miocene, Caprock, Pliocene, and Lafayette formations with the top of the injection zone varying from approximately 880 feet BGL to 1,100 feet BGL. (UIC Permit Nos. WDW344 through WDW350, Section IV, General Description and Location of Injection Activity). The greatest increase in the vertical extent of the authorized injection zone would be in Permit No. WDW348. Final Draft Permit No. WDW348 would increase the vertical extent of the authorized injection zone by 2,470 feet. (Final Draft Permit WDW348, Section IV). The smallest increase in the vertical extent of the authorized injection zone would be in Permit No. WDW347. (Final Draft Permit WDW347, Section IV). Final Draft Permit No. WDW347 would increase the vertical extent of the authorized injection zone by 2,020 feet (Final Draft Permit WDW347, Section IV).

UIC Permit No. WDW344 currently authorizes an injection zone at 940 feet BGL to 1,785 feet BGL, a total of 845 vertical feet. FDP No. WDW344 would authorize an injection zone at 940 feet BGL to 4,000 feet BGL, a total 3,060 vertical feet, and an increase of 2,215 vertical feet. (UIC Permit No. WDW344, Section IV, and Final Draft Permit WDW344, Section IV).

UIC Permit No. WDW345 currently authorizes an injection zone at 880 feet BGL to 1,750 feet BGL, a total of 870 vertical feet. FDP No. WDW345 would authorize an injection zone at 880 feet BGL to 4,000 feet BGL, a total of 3,120 vertical feet BGL and an increase of 2,250 vertical feet (UIC Permit No. WDW345, Section IV, and Final Draft Permit WDW345, Section IV).

UIC Permit No. WDW346 currently authorizes an injection zone at 952 feet BGL to 1,551 feet BGL, a total of 599 vertical feet. FDP No. WDW346 would authorize an injection zone at 1,076 feet BGL to 4,000 feet BGL, a total of 2,924 vertical feet and an

increase of 2,325 feet. (UIC Permit No. WDW346, Section IV, and Final Draft Permit WDW346, Section IV).

UIC Permit No. WDW347 currently authorizes an injection zone at approximately 1,100 feet BGL to 1,980 feet BGL a total of 880 vertical feet. FDP No. WDW347 would authorize an injection zone at approximately 1,100 feet BGL to 4,000 feet BGL, a total of 2,900 vertical feet and an increase of 2,020 feet (UIC Permit No. WDW347, Section IV, and Final Draft Permit WDW347, Section IV).

UIC Permit No. WDW348 currently authorizes an injection zone at approximately 950 feet BGL to 1,530 feet BGL, a total of 580 vertical feet. FDP No. WDW348 would authorize an injection zone at approximately 950 feet BGL to 4,000 feet BGL, a total of 3,050 vertical feet and an increase of 2,470 feet (UIC Permit No. WDW348, Section IV, and Final Draft Permit WDW348, Section IV).

UIC Permit No. WDW349 currently authorizes an injection zone at approximately 925 feet BGL to 1,580 feet BGL, a total of 655 vertical feet. FDP No. WDW349 would authorize an injection zone at approximately 925 feet BGL to 4,000 feet BGL, a total of 3,075 vertical feet and an increase of 2,420 feet. (UIC Permit No. WDW349, Section IV, and Final Draft Permit WDW349, Section IV).

UIC Permit No. WDW350 currently authorizes an injection zone at approximately 1,000 feet BGL to 1,690 feet BGL, a total of 690 vertical feet. FDP No. WDW350 would authorize an injection zone at approximately 1,000 feet BGL to 4,000 feet BGL, a total of 3,000 vertical feet and an increase of 2,310 feet (UIC Permit No. WDW350, Section IV, and Final Draft Permit WDW350, Section IV).

The Executive Director reviewed the Application and determined that the proposed changes to the injection zone satisfy the regulatory requirements and that the proposed injection zone and injection interval are geologically suitable for disposal of nonhazardous waste by injection.

Comment No. 2:

The Pipkins commented that they own approximately 1800 acres adjacent to the US Ecology Winnie facility and that they have entered a contact with Chevron USA, Inc to sell the right for Chevron to inject carbon dioxide into the sub-surface pore space of their property for agreed consideration and that they have not entered a contract with the Applicant.

Response No. 2:

An application for a Class I UIC permit must identify the owner(s) of the real property where the UIC facility is located or is proposed to be located in accordance with 30 TAC § 305.45. An application must also depict the boundary(s) of the tract(s) of land upon which the facility is located, identify the areal size in acres, and locate and identify each injection well. (30 TAC §§ 305.45 and 331.121). Additionally, an application for a solid waste permit must provide a legal description of the tract or tracts of land upon which the facility is or will be located. (30 TAC § 305.45 and Tex.

Health & Safety Code § 361.087). Facility is a defined term that includes all contiguous land, and structures, other appurtenances, and improvements on the land, used for storing, processing, or disposing of waste including pre-injection units used for storage and processing waste to be injected into the injection well. (30 TAC § 335.1(69)). An application for a UIC permit must also include a complete and accurate mailing list of the facility owner(s), facility mineral interest owner(s), adjacent landowners, and adjacent mineral interest owners cross-referenced to map depicts the parcels of land that constitute the facility and that are adjacent to the facility. (30 TAC §§ 39.413(1), 39.651(c) and (d), 281.5(6), and 305.45(a)(6)).

Additionally, an application for a Class I UIC permit must demonstrate that no existing rights will be impaired by use or installation of the injection well in accordance with Tex. Water Code § 27.051(a)(2).

The Application represents the US Ecology facility is located on 129.662 acres of property owned by US Ecology. (Application, Section I.Q.6). Additionally, the Application includes a landowner and mineral interest owner map and mailing list. (Application, Section II). The Application adjacent landowner list and map represent that Pipkin Ranch Holdings, LP, owns property adjacent to the US Ecology facility. Further, the Application represents that 20 years of commercial injection activities have been safely conducted at the facility, that the permittee owns the facility property and produces minerals therefrom and that no rights including mineral rights have been impaired during 20 years of commercial operations. (Application, Section I.M, Attachment A, Public Interest Demonstration). Finally, the Application includes a non-endangerment of oil and gas reservoir letter from the Railroad Commission of Texas dated June 20, 2019, issued after its staff completed a technical review of US Ecology's Application. (Application, Section III, Attachment E, Railroad Commission Letter).

The Executive Director has reviewed the Application and determined that it satisfies the regulatory requirements regarding the siting of the UIC wells.

Comment No. 3:

The Pipkins commented that they have concluded that the waste plume injected by US Ecology has migrated through the subsurface onto their property because the US Ecology facility is located on fewer than 200 acres of property, because the Applicant has disposed of waste via injection, and because the Applicant plans to dispose additional waste by injection in the future. The Pipkins also commented that they may engage a geologist to verify that the waste plume is located on their property.

Response No. 3:

An application for a Class I UIC permit must confidently predict the waste fate and transport through the use of analytical and numerical models in accordance with 30 TAC § 331.42.

Injection wells authorized by UIC Permit Nos. WDW 344, WDW345 and WDW346 are installed and in service. The Application provided calculated waste plume distances based on the recorded volume of waste disposed by injection and the recorded

injection rates. (Application, Section VII.A.11). These calculations concluded that the waste plume currently extends 1,858 feet from WDW344 and 1,515 feet from WDW345. (*Id.*). Additionally, US Ecology's waste plume extent calculations, based on conservative worst-case-scenario assumptions including the maximum authorized cumulative injection volume, project that 30 years from the date of the Application the waste plume will extend a distance of 4,587 feet from WDW344, 4,489 feet from WDW345, and a distance of 4,388 feet from WDW346 and the proposed injection wells. (*Id.*). US Ecology's calculations suggest that the waste plume is generally following the trend of the caprock around a salt dome and predicts that the waste plume will migrate a maximum distance of 4,587 feet from any of the installed injection wells after 30 years of injection from the date of the Application. (*Id.*).

The Executive Director has reviewed the application and determined that the information provided regarding waste fate and transport satisfies the regulatory requirements.

Comment No. 4:

The Pipkins allege that US Ecology is committing negligence, gross negligence, trespass, subsurface trespass, public nuisance, private nuisance, tortious interference with a contract, and unjust enrichment "through" UIC permit Nos. WDW344 -WDW350. The Pipkins further allege that the Commission granting the renewals and major amendment would constitute the Commission and the state of Texas endorsing or formally approving of the private act of trespass and would not be equitable.

Response No. 4

The Commission derives jurisdiction from Texas statutes. The causes of action raised by the commenters, negligence, gross negligence, trespass, subsurface trespass, public nuisance, private nuisance, tortious interference with a contract, and unjust enrichment, are civil causes of action. The Commission does not have jurisdiction to adjudicate these civil causes of action. Additionally, the Injection Well Act expressly states that a permit issued under the Act does not relieve a person of any civil liability. (Tex. Water Code § 27.104). Further a permit issued by the Commission "does not convey any property rights of any sort, nor any exclusive privilege, and does not become a vested right in the permittee" in accordance with 30 TAC § 305.125(16) (relating to Standard Permit Conditions). (UIC Permit Nos. WDW344 through WDW350, Section XII.D, and Final Draft Permit Nos. WDW344 through WDW350, Section XII.D). Further, the issuance of a permit by the Commission "does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of state or local law or regulations." (*Id.* at Section XII.E).

Whether the Applicant is or will commit any of the alleged civil causes of action is outside of the scope of the Executive Director's and the Commission's consideration of the Application.

Comment No. 5:

The Pipkins request a public meeting.

Response No. 5:

The Commission is required to hold a public meeting if the Executive Director determines that there is a substantial or significant degree of public interest in an application or if a public meeting is requested by a member of the legislature who represents the general area in which the facility is located or proposed to be located in accordance with 30 TAC § 55.154(c).

The Executive Director did not determine that there is a substantial or significant degree of public interest in US Ecology's Application.

Comment No. 6:

The Pipkins request a contested case hearing.

Response No. 6:

A request for a contested case hearing must meet the requirement of 30 TAC § 55.201. The Commission will consider all timely hearing requests received by the Office of the Chief Clerk in accordance with 30 TAC §§ 50.113 (relating to Applicability and Action on Application) and 50.209 (relating to Processing Requests for Consideration and Contested Case Hearing).

Additional information about how Affected Persons may request a contested case hearing is available in the cover letter transmitting this Response.

V. Conclusion

The Executive Director has reviewed the application and determined that it meets the regulatory and statutory requirements.

VI. Changes Made to the Draft Permits in Response to Comments

No changes were made to the draft permits in response to public comments received.

Respectfully submitted,

Texas Commission on Environmental Quality

Kelly Keel-Linden
Acting Executive Director

Erin Chancellor, Director
Office of Legal Services

Charmaine Backens, Deputy Director
Environmental Law Division



Diane Goss, Staff Attorney
Environmental Law Division
State Bar of Texas No. 24050678
Diane.goss@tceq.texas.gov
PO Box 13087, MC-3087
Austin, Texas 78711-3087
Phone: (512) 239-5731



Don Redmond, Staff Attorney
Environmental Law Division
State Bar No. 24010336
P.O. Box 13087, MC 173
Austin, Texas 78711-3087
Phone: (512) 239-0612
Fax: (512) 239-0606

REPRESENTING THE EXECUTIVE DIRECTOR OF
THE TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

CERTIFICATE OF SERVICE

I certify that on July 11, 2023, that the Executive Director's Response to Public Comment on the application by US Ecology Winnie, LLC for renewal and major amendment of UIC Permit Nos. WDW344, WDW345, WDW346, WDW347, WDW348, WDW349 and WDW350 was filed with the TCEQ Office of the Chief Clerk.

Diane Goss

Diane Goss, Staff Attorney
Environmental Law Division
State Bar of Texas No. 24050678